

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر نوفمبر



Important questions on unit two from the directorates' exams



First multiple choice questions

- 1 The coefficient of the algebraic term x^2 is (Deir Mawas - El-Menia 25)
(a) 0 (b) 1 (c) 2 (d) 3
- 2 The coefficient of the algebraic term $-2xy^3$ is (El-Waily - Cairo 25)
(a) -2 (b) 3 (c) 2 (d) -6
- 3 Which of the following represents two similar algebraic terms ? (Shibin El-Kom - El-Monofia 25)
(a) x^2, y^2 (b) $7m, 7$ (c) $3b, 8b$ (d) $2a, -2a^2$
- 4 Which of the following are two similar algebraic terms ? (El-Rahmaniyah - El-Beheira 25)
(a) $5x^2y, 7yx^2$ (b) $5x, 5$ (c) $13a^2, 7a^3$ (d) $3x, -7x^2$
- 5 The constant term in the expression : $4x + 3y - 8$ is (Shoubra - Cairo 25)
(a) 3 (b) 4 (c) -8 (d) 16
- 6 How many terms are there in the expression : $abc - 8$? (Manfalut - Assiut 25)
(a) 1 (b) 2 (c) 3 (d) 4
- 7 In the expression : $4x - 6y + 7xy - 8$, the coefficient of y is (Luxor - Luxor 25)
(a) 6 (b) 7 (c) 8 (d) -6
- 8 What is the algebraic expression representing 5 is added to twice the number x ? (Akhmim - Souhag 25)
(a) $x - 5$ (b) $2x - 5$ (c) $2x + 5$ (d) $x + 5$
- 9 Youssef has x pounds and his father gave him five pounds. Which mathematical expression expresses what Youssef has ? (Kafr Saad - Damietta 25)
(a) 5 (b) $x + 5$ (c) $x - 5$ (d) $5x$
- 10 What is the inequality representing the set of integers less than or equal to 3 ? (El-Khosous - El-Kalyoubia 25)
(a) $x < 3$ (b) $x \leq 3$ (c) $x > 3$ (d) $x \geq 3$

11 Ahmed's age is now x years old. What is the mathematical expression for Ahmed's age after 9 years ? (South - Ismailia 25)

- (a) $x + 9$ (b) $x - 9$ (c) $18 - x$ (d) $18 + x$

12 Heba is now x years old. Her age before 9 years was years. (El-Qassasin - Ismailia 25)

- (a) $x \div 9$ (b) $x - 9$ (c) $x + 9$ (d) $9x$

13 Two consecutive natural numbers , if the first number is $x - 2$, then the next number is (El-Khanka - El-Kalyoubia 25)

- (a) x (b) $x - 1$ (c) $1 + x$ (d) $2 + x$

14 The mathematical expression : $6x = 7$ represents (El-Mansha - Souhag 25)

- (a) An inequality. (b) An equation.
(c) An algebraic expression. (d) A numerical expression.

15 $5a + a =$ (Saqalta - Souhag 25)

- (a) $6a$ (b) $-6a$ (c) $4a$ (d) $-4a$

16 Which of the following is equal to $8y$? (El-Agmy - Alex. 25)

- (a) $5 + 3y$ (b) $3 + 5y$ (c) $8 + y$ (d) $3y + 5y$

17 A rectangle with length of $5x$ cm and width of $2x$ cm has a perimeter of cm. (El-Qusaiya - Assiut 25)

- (a) $7x$ (b) $14x$ (c) $10x$ (d) $10x^2$

18 The quantity represented by the number 10 subtracted from x is (El-Hawamdiya - Giza 25)

- (a) $10 - 5x$ (b) $x - 10$ (c) $5x - 10$ (d) $10 - x$

19 What is the mathematical expression that represents the subtraction (-2) from x ? (El-Zarka - Damietta 25)

- (a) $x - 2$ (b) $2 - x$ (c) $-2 - x$ (d) $x + 2$

20 If x is greater than -5 , then the mathematical expression represents this is (Fayed - Ismailia 25)

- (a) -4 (b) 4 (c) $x - 5$ (d) $x + 5$

- 21** The result of the addition of $-5x$, $3x$ is *(Ashmoun - El-Monofia 25)*
 (a) $-2x$ (b) $2x$ (c) $-8x$ (d) $8x$
-
- 22** The rest of the subtraction $5x$ from $7x$ equals *(New Cairo - Cairo 25)*
 (a) $2x$ (b) $12x$ (c) $-2x$ (d) $-12x$
-
- 23** The result of subtracting $3a$ from a is *(Abu El-Nomros - Giza 25)*
 (a) $-2a$ (b) $2a$ (c) a^2 (d) $4a$
-
- 24** The result of the subtraction $(-7a)$ from $(3a)$ is *(East Mansoura - El-Dakahlia 25)*
 (a) $4a$ (b) $-4a$ (c) $-10a$ (d) $10a$
-
- 25** What is the increase of $7x$ than $2x$? *(Ibrahimia - El-Sharkia 25)*
 (a) $9x$ (b) $5x$ (c) $-5x$ (d) x
-
- 26** The algebraic term : $-5x$ exceeds the algebraic term : $-11x$ by *(North Giza - Giza 25)*
 (a) $-16x$ (b) $6x$ (c) $-6x$ (d) $16x$
-
- 27** What is the algebraic expression that is equivalent to the following expression?
 $2x - 3 - 4x + 1$ *(Qalyub - El-Kalyoubia 25 / Bandar Damanhour - El-Beheira 25)*
 (a) $2x - 2$ (b) $-2x + 2$ (c) $-6x - 4$ (d) $-2 - 2x$
-
- 28** The simplest form of the expression : $a + a + b + a + b$ is *(Borg El-Arab - Alexandria 25)*
 (a) 5 (b) $2b + 3a$ (c) $2a + 3b$ (d) $5ab$
-
- 29** The simplest form of the expression : $2x + 5y + x - 5y$ is *(Esna - Luxor 25)*
 (a) $3x$ (b) $10y$ (c) $3x + 10y$ (d) $3x - 10y$
-
- 30** The result of adding the two expressions : $4x + 6$, $3x - 2$ is *(Manshaat El-Qanater - Giza 25 / Itai El-Baroud - El-Beheira 25)*
 (a) $7x + 8$ (b) $7x + 4$ (c) $-x + 4$ (d) $-x - 4$
-
- 31** The sum of the two expressions : $-3x + 5$, $2x - 3$ is *(Tala - El-Monofia 25)*
 (a) $-5x + 2$ (b) $2 - x$ (c) $2 + x$ (d) $x - 2$
-
- 32** A rectangle has a perimeter of 24 cm. If its length is m cm, then its width is cm. *(Kom Ambo - Aswan 25)*
 (a) $m - 12$ (b) $12 - m$ (c) $12 + m$ (d) $12m$

- 33** Which of the following expresses twice the number x plus 3 is equals to 7 ?
(Menouf - El-Monofia 25)
(a) $x + 3 = 7$ (b) $2x + 3 = 7$ (c) $3x + 2 = 7$ (d) $2x + 7 = 3$
-
- 34** Ziad is now x year old , and seven years ago he was 18 year old. Which of the following equations expresses the previous situation ?
(Qaleen - Kafr El-Sheikh 25)
(a) $x + 18 = 7$ (b) $x - 7 = 18$ (c) $x + 7 = 18$ (d) $x = 18$
-
- 35** Two consecutive odd numbers add up to 28. Which of the following equations expresses this ?
(Ihnasia - Beni Suef 25)
(a) $x + x + 1 = 28$ (b) $2x + 1 = 28$ (c) $2x - 1 = 28$ (d) $2x + 2 = 28$
-
- 36** If $-7k = 28$, then $k + 6 = \dots\dots\dots$
(El-Gomrok - Alex. 25)
(a) -2 (b) 2 (c) 6 (d) -6
-
- 37** If $3x - 2 = 4$, then $5x = \dots\dots\dots$
(Facous - El-Sharkia 25)
(a) 1 (b) -8 (c) 10 (d) 12
-
- 38** If $(x - 1)$ is the multiplicative inverse of the number $\frac{1}{5}$, then $x = \dots\dots\dots$ (Farshout - Qena 25)
(a) 6 (b) 4 (c) 5 (d) $1\frac{1}{5}$
-
- 39** If $\frac{x}{5}$ is the largest negative integer , then $x + 5 = \dots\dots\dots$ (Kaha - El-Kalyoubia 25)
(a) -3 (b) -1 (c) 0 (d) 3
-
- 40** If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is
(El-Badrashin - Giza 25)
(a) $\{5\}$ (b) $\{2\}$ (c) $\{1\}$ (d) $\emptyset$
-
- 41** The solution set in $\mathbb{N}$ of the equation $3x - 1 = 10$ is
(Qattour - El-Gharbia 25)
(a) $\{3\}$ (b) $\{4\}$ (c) $\{5\}$ (d) $\emptyset$
-
- 42** Which of the following equations is equivalent to the equation : $2n + 1 = \frac{3}{2}$?
(Samasta - Beni Suef 25)
(a) $n + 2 = 6$ (b) $2n = 4$ (c) $8n = 2$ (d) $n - 2 = 1$
-
- 43** Which of the following equations is not equivalent to the equation : $3x - 1 = 8$?
(Farshout - Qena 25)
(a) $3x - 2 = 7$ (b) $x + 1 = 4$ (c) $5x = 5$ (d) $x - 1 = 2$

- 44** The solution set of the equation: $3x - 1 = 6$ in $\mathbb{Z}$ is *(Rashid - El-Beheira 25)*
 (a) $\{2\}$ (b) $\emptyset$ (c) $\{\frac{7}{3}\}$ (d) $\{-2\}$
-
- 45** Which of the following equations has no solution in $\mathbb{Z}$? *(El-Warrak - Giza 25)*
 (a) $3x = 6$ (b) $3x = 15$ (c) $3x = 16$ (d) $3x = 21$
-
- 46** The length of the base of a parallelogram is 15 cm and its corresponding height is $(2x + 3)$ cm, if its area is 135 square centimeters, then $x =$ *(Qaleen - Kafr El-Sheikh 25)*
 (a) 2 (b) 3 (c) 4 (d) 5

Second

Essay questions

1 Write the following algebraic expressions in their simplest form :

- ① $3x + 2y + 5x - 2y + 4$ *(Matay - El-Menia 25)*
 ② $3x - 2y - y + x$
 Then find the value of the expression when : $x = 3$, $y = 1$ *(Fayed - Ismailia 25)*
 ③ $2(n - 3m) - 3(2n + m)$ *(El-Khanka - El-Kalyoubia 25)*
 ④ $3(x - 7) - 5(2x - 5)$ *(Sars El-Layan - El-Monofia 25)*
 ⑤ $3(a - 2b) - 2(a + b)$
 Then find the value of the expression when : $a = 5$, $b = -1$ *(Atfih - Giza 25)*

2 Find the sum of each of the following :

- ① $2a - 3b + 10$, $3a + 5b - 7$ *(New Cairo - Cairo 25)*
 ② $a + 2b + 5$, $3a - 2b - 8$ *(Kom Ambo - Aswan 25)*
 ③ $6a + 4b - c$, $2a - 3b + 5c$ *(Fakous - El-Sharkia 25)*
 ④ $-m + 9n - k$, $-3m - 12n + k$ *(Abu Qurqas - El-Menia 25)*
 ⑤ $4x^2 - 3x + 5$, $x^2 - 7x - 8$ *(North Giza - Giza 25)*
 ⑥ $3b - 7a + 8$, $4a + b - 4$, $3a - 2b + 1$ *(El-Agouza - Giza 25)*
 ⑦ $2a - 5b - 3$, $2b + 3a$, then find the numerical value of the result when:
 $a = 3$, $b = 2$ *(Shibin El-Kom - El-Monofia 25)*

3 Find the difference in each of the following :

- ① $4x - 5y + 7$ from $7x + 3y + 2$ *(El-Maasara - Cairo 25)*
 ② $2a - 5b + 3w$ from $2a - 5b - w$ *(Badrashin - Giza 25)*

4 What is the increase of the expression : $3x - 6y + 4$ than the expression : $3x + y - 3$?

(El-Kareem - El-Sharkia 25)

5 What is the decrease of the expression : $x + 2y - 3z$ than the expression : $3y - 3z + 10x$?
(Rashid - El-Beheira 25)

6 If the sum of two expressions is : $7x - 3y + 5z$ and one of these expression is : $2y - 3x + z$ find the other expression.
(Ihnasia - Beni Suef 25)

7 Find the solution set of the equation : $3x - 6 = 18$ if the substitutions set is $\{6, 7, 8\}$
(South - Ismailia 25)

8 Find the solution set of each of the following equations in $\mathbb{N}$:

① $3x + 4 = 10$

(El-Harm - Giza 25)

② $5x - 10 = 5$

(Ibrahimia - El-Sharkia 25)

③ $-3 + 4x = 7$

(Kafr Saad - Damietta 25)

④ $3x + 5 = 2$

(Dayroot - Assiut 25)

⑤ $2(3y - 1) = 10$

(Damanshour - El-Beheira 25)

⑥ $3(x - 2) = -8$

(Manfalut - Assiut 25)

⑦ $7 = 2(x + 3)$

(Sidi Salem - Kafr El-Sheikh 25)

9 Find a solution set of each of the following equations in $\mathbb{Z}$:

① $3x + 11 = 2$

(El-Montazah - Alex. 25)

② $5x + 7 = 37$

(East El-Mahalla - El-Gharbia 25)

③ $3x - 5 = 7$

(El-Santa - El-Gharbia 25)

④ $2x - 3 = -15$

(West Kafr El-Sheikh - Kafr El-Sheikh 25)

⑤ $5(x + 7) = 80$

(Samasta - Beni Suef 25)

⑥ $3(2x - 1) = 27$

(Samannoud - El-Gharbia 25)

10 Find the solution set of the following equations in $\mathbb{Q}$:

① $3x + 7 = 22$

(Adwa - El-Menia 25)

② $5 + 2x = 15$

(Mit Salsil - El-Dakahlia 25)

③ $5x - 9 = 11$

(Dar El-Salam - Souhag 25)

④ $2x - 5 = -2$

(El-Zarka - Damietta 25)

⑤ $\frac{2}{5}x + 1 = 3$

(El-Manzala - El-Dakahlia 25)

⑥ $2(x + 3) = 36$

(El-Khosous - El-Kalyoubia 25)

⑦ $3(2x - 3) = 9$

(Ibshaway - El-Fayoum 25)

⑧ $3(x - 5) = -18$

(El-Qareen - El-Sharkia 25)

11 Find the solution set of the following equations in $\mathbb{Q}$:

① $5x + 3 = 12 + 2x$

(Adfu - Aswan 25)

② $3x + 2 = x + 10$

(Esna - Luxor 25)

③ $2(x + 3) = 1 + x$

(Abu El-Matamir - El-Beheira 25)

④ $2(x + 4) = 5x - 1$

(Atfih - Giza 25)

12 If $5k = 20$, what is the value of : $3k + 1$?

(El-Bagour - El-Monofia 25)

13 Three consecutive numbers their sum is 123 Find these numbers in steps.

(Quesna - El-Monofia 25)

14 Three consecutive even numbers their sum is 84 Find these numbers.

(Nabarow - El-Dakahlia 25)

15 Two natural numbers , one of them is three times the other , and their sum is 48
Find the two numbers.

(El-Sinnblawein - El-Dakahlia 25)

16 If Tamer now is 4 times Khalid's age , and the sum of their ages is 50 year.
How old is Tamer now ?

(El-Tall El-Kabir - Ismailia 25)

17 If the length of a rectangle is twice as its width , if the perimeter of the rectangle is 30 cm.
Calculate its area.

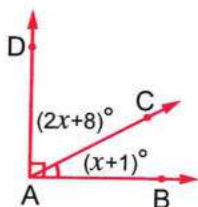
(El-Agouza - Giza 25)

1 Choose the correct answer from the given ones :

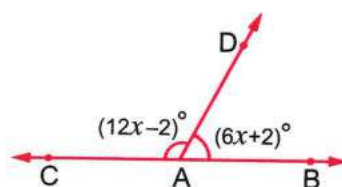
- 1 If $m(\angle A) = 70^\circ$ and $\angle A$ complements $\angle B$, what is the measure of $\angle B$?
 (a) 20° (b) 110° (c) 290° (d) 70°
- 2 If $\angle X$ and $\angle Y$ are supplementary angles, and $m(\angle X) = 3m(\angle Y)$, what is the measure of $\angle X$?
 (a) 45° (b) 90° (c) 135° (d) 180°
- 3 What is the type of the angle that supplements an obtuse angle ?
 (a) Acute. (b) Obtuse. (c) Right. (d) Reflex.
- 4 If $m(\angle A) = 36^\circ 60'$, then the reflex of $m(\angle A)$ is
 (a) 37° (b) 53° (c) 143° (d) 323°
- 5 If $\{7, 3x\} = \{6, y+3\}$, what is the value of $x+y$?
 (a) 4 (b) 5 (c) 6 (d) 13
- 6 If $x = 2$, $y = -1$, then $x+y =$
 (a) 1 (b) -1 (c) 3 (d) -3

2 Find the value of x in each of the following :

1



2



- 3 1 If $y = \frac{1}{2}$ and $x = \frac{3}{4}$, find the value of : $\frac{x+y}{x-y}$

- 2 If $X = \{2, 3, 9\}$, $Y = \{1, 2, 3, 7\}$, $Z = \{5, 3\}$, find using listing method :

- ① $X \cup Y \cup Z$
 ② $X \cap Y$
 ③ $X \cap Y \cap Z$

1 Choose the correct answer from the given ones :

1 The sum of the measures of the accumulative angles at a point equals

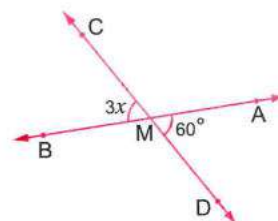
- (a) Two right angles. (b) Three right angles.
(c) Four right angles. (d) Five right angles.

2 In the opposite figure :

$$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$$

what is the value of x ?

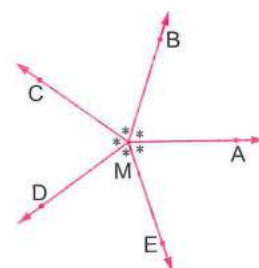
- (a) 60 (b) 180
(c) 20 (d) 30



3 In the opposite figure :

What is the measure of $\angle AMC$?

- (a) 60° (b) 72°
(c) 144° (d) 360°



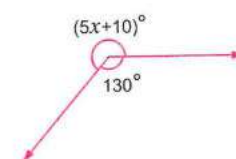
4 If two vertically opposite angles have measures $(3x)^\circ$ and $(x + 56)^\circ$, then the measure of each one of them is

- (a) 28° (b) 56° (c) 80° (d) 84°

5 In the opposite figure :

What is the value of x ?

- (a) 230 (b) 220
(c) 44 (d) 22



6 If the price of a car increased from 250,000 LE to 300,000 LE, what is the rate of increase ?

- (a) 10 % (b) 20 % (c) 50 % (d) 70 %

2 1 In the opposite figure :

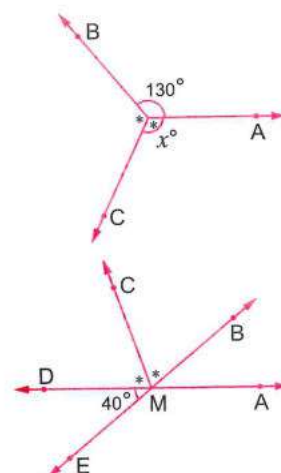
Find the value of : x

2 In the opposite figure :

$$\overrightarrow{AD} \cap \overrightarrow{EB} = \{M\}$$

, $\overrightarrow{MC}$ bisects $\angle DMB$

Find the value of : $m(\angle AMC)$



3 Find in Q the solution set of each of the following equations :

1 $9 - 2x = 5$

2 $4(x - 1) = 3(x + 1)$

November tests



Test

1

1 Choose the correct answer from the given ones :

1 Which of the following represents the solution to the equation : $3(X - 4) = 0$ in $\mathbb{Q}$?

- (a) 0 (b) 4 (c) -4 (d) 12

2 The angle that supplements an acute angle is angle.

- (a) an acute. (b) an obtuse. (c) a straight. (d) a reflex.

3 If an isosceles triangle has two sides of lengths : 3 cm and 7 cm. What is the length of the third side ?

- (a) 3 cm (b) 4 cm (c) 5 cm (d) 7 cm

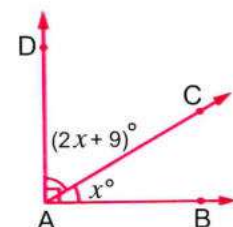
4 If $\angle X$ supplements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, what is the measure of $\angle Y$?

- (a) 120° (b) 60° (c) 45° (d) 30°

5 In the opposite figure :

Find the value of X ?

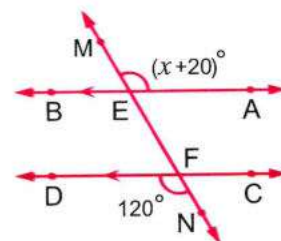
- (a) 90° (b) 33°
(c) 81° (d) 27°



6 In the opposite figure :

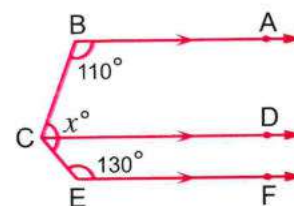
Find the value of X ?

- (a) 40° (b) 80°
(c) 100° (d) 140°



2 In the opposite figure :

Find with proof the value of X



3 Find the solution set then solves each of the following equations :

1 $2X - 7 = -6$ in $\mathbb{Q}$

2 $3(X - 1) = X + 2$ in $\mathbb{Z}$

Test

2

1 Choose the correct answer from the given ones :

- 1 If two adjacent sides of a parallelogram are equal in length , then the shape is
- (a) a square. (b) a rhombus. (c) a rectangle. (d) a trapezium.
- 2 In $\triangle ABC$, if $m(\angle A) + m(\angle B) = 110^\circ$, what is the measure of $\angle C$?
- (a) 110° (b) 90° (c) 70° (d) 55°
- 3 An angle of measure 70° is vertically opposite an angle of measuring
- (a) 30° (b) 70° (c) 90° (d) 180°
- 4 If $m(\angle X) = 42^\circ$, what is the measure of (reflex $\angle X$) ?
- (a) 42° (b) 48° (c) 138° (d) 318°
- 5 The solution set in $\mathbb{Z}$ for the equation : $6 - 3x = x - 4$ is
- (a) $\emptyset$ (b) $\{2\}$ (c) $\{1\}$ (d) $\{3\}$

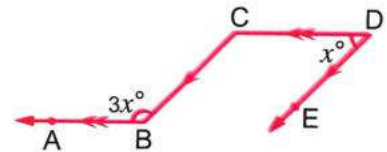
6 In the opposite shape :

$$\overrightarrow{CD} \parallel \overrightarrow{BA}$$

$$, \overrightarrow{DE} \parallel \overrightarrow{CB}$$

What is the value of x ?

- (a) 60° (b) 45° (c) 120° (d) 90°

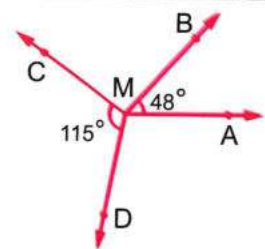


2 In the opposite figure :

$$m(\angle BMC) = 2 m(\angle AMB)$$

$$, m(\angle DMC) = 115^\circ , m(\angle AMB) = 48^\circ$$

, find : $m(\angle AMD)$



- 3 The length of a rectangle is 7 meters longer than it is wide. If its perimeter is 66 meters , find its dimensions.

1 Choose the correct answer from the given ones :

1 Which of the following angles is a right angle ?

- (a) $89^\circ 56'$ (b) $89^\circ 61'$ (c) $89^\circ 60'$ (d) $88^\circ 60'$

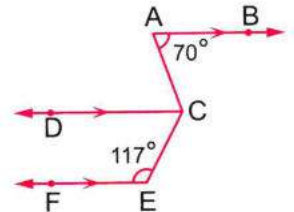
2 In the opposite figure :

$$m(\angle A) = 70^\circ, \overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$$

$$, m(\angle E) = 117^\circ$$

What is the measure of $\angle ACE$?

- (a) 127° (b) 120° (c) 187° (d) 133°



3 The two diagonals are equal in length and perpendicular in

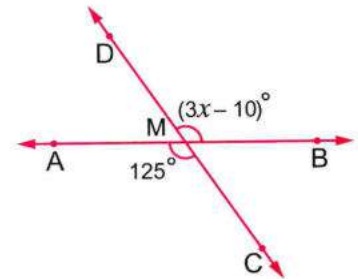
- (a) parallelogram. (b) rectangle. (c) rhombus. (d) square.

4 In the opposite figure :

$$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$$

What is the value of x ?

- (a) 38° (b) 40°
(c) 45° (d) 55°



5 If $3x = 3$, then $2x - 1 = \dots\dots\dots$

- (a) 1 (b) 2 (c) 3 (d) 4

6 The sum of the measures of the angles of the triangle is equal to the measure of

- (a) a right angle. (b) a straight angle. (c) an acute angle. (d) a reflex angle.

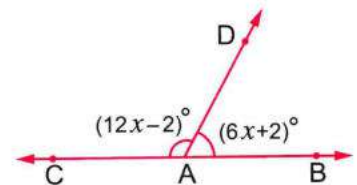
2 Two natural numbers, one is three times the other, and their sum is 92

What are the two numbers ?

3 In the opposite figure :

$$\text{If } A \in \overrightarrow{BC}$$

, find the value of x with proof.



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر نوفمبر



November Revision

First: Choose the correct answer:

1 If $x + 7 = 12$, then the value of $7x =$

- a** 5 **b** 14 **c** 21 **d** 35

2 If $9x = 36$, then the value of $6x =$

- a** 36 **b** 24 **c** 18 **d** 12

3 If $2x - 3 = 15$, then the value of $\frac{1}{3}x =$

- a** 18 **b** 12 **c** 9 **d** 3

4 The mathematical expression expresses that:

the sum of two consecutive even numbers equals 26 is

- a** $2x + 1 = 26$ **b** $2x + 2 = 26$ **c** $2x + 4 = 26$ **d** $2x - 4 = 26$

5 The mathematical expression expresses that:

the sum of two consecutive odd numbers equals 44 is

- a** $2x + 1 = 44$ **b** $4x + 2 = 44$ **c** $2x + 2 = 44$ **d** $2x - 4 = 44$

6 If $m(\angle A) = 70^\circ$, then $m(\angle A \text{ reflex}) =$ $^\circ$

- a** 140° **b** 240° **c** 270° **d** 290°

7 The mathematical expression expresses that: Abdulrahman's age after

10 years is 35, if his age now is x is

- a** $x - 10 = 35$ **b** $x + 10 = 35$ **c** $x - 25 = 35$ **d** $x + 10 = 45$

8 If the angles $\angle A$ and $\angle B$ are complementary and $m(\angle A) = 40^\circ$,

then $m(\angle B) =$

- a** 40° **b** 50° **c** 90° **d** 140°

9 What is the measure of the angle that supplements an angle of

measure $34^\circ 60''$?

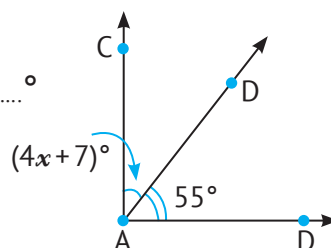
- a** 55° **b** 56° **c** 145° **d** 146°

- 10 The angle 68° complements angle of measure
 a 22° b 125° c 110° d 305°
- 11 The angle 23° supplements angle of measure
 a 23° b 67° c 157° d 337°
- 12 If $m(\angle X) = m(\angle Y)$, $\angle X$ complements $\angle Y$, then $m(\angle Y) =$
 a 90° b 45° c 180° d 360°
- 13 The sum of the measures of the interior angles of a triangle =
 a 90° b 120° c 180° d 360°
- 14 The sum of measures of the exterior angles of any triangle equals
 a 90° b 120° c 180° d 360°
- 15 In triangle ABC, if $m(\angle A) = 70^\circ$ and $m(\angle C) = 50^\circ$,
 then $m(\angle B) =$
 a 40° b 50° c 60° d 70°
- 16 If the measures of the three angles in a triangle are equal, then the
 measure of each angle is
 a 40° b 50° c 60° d 90°

17 In the opposite figure :

If $\overrightarrow{AB}$ is perpendicular to $\overrightarrow{AC}$, then $x =$ $^\circ$

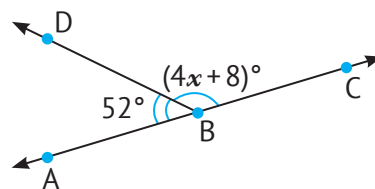
- a 35 b 28
 c 14 d 7



18 In the opposite figure :

If A, B, C are on a straight line then $x =$ $^\circ$

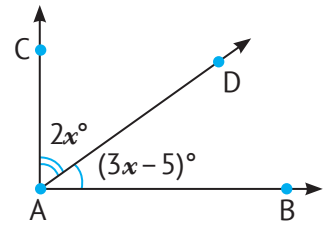
- a 28 b 30
 c 32 d 38



19 In the opposite figure :

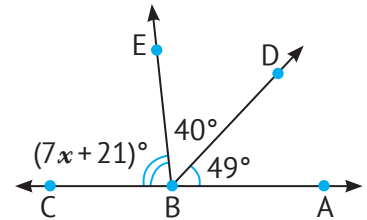
If $\overrightarrow{AB}$ is perpendicular to $\overrightarrow{AC}$, Then $x = \dots\dots\dots^\circ$

- a** 37 **b** 31
c 19 **d** 17

**20 In the opposite figure :**

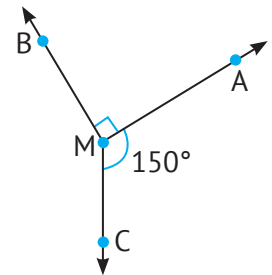
If A, B, C are on a straight line, then $x = \dots\dots\dots^\circ$

- a** 28 **b** 21
c 15 **d** 10

**21 In the opposite figure :**

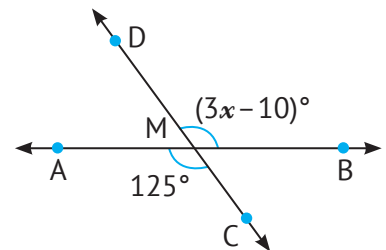
$m(\angle BMC) = \dots\dots\dots^\circ$

- a** 140 **b** 130
c 120 **d** 110

**22 In the opposite figure :**

Then $x = \dots\dots\dots^\circ$

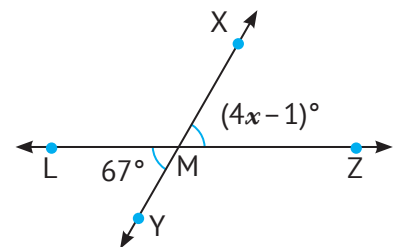
- a** 28 **b** 21
c 15 **d** 45

**23 In the opposite figure :**

$$\overleftrightarrow{XY} \cap \overleftrightarrow{LZ} = \{M\}$$

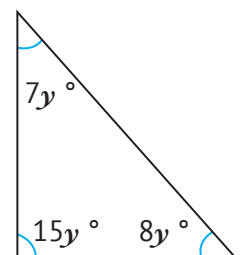
Then $x = \dots\dots\dots^\circ$

- a** 34 **b** 21
c 17 **d** 16.5

**24 In the opposite figure :**

$$y = \dots\dots\dots^\circ$$

- a** 10 **b** 9
c 6 **d** 5



25 In the opposite figure :

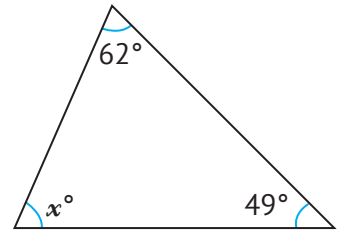
$x = \dots\dots\dots^\circ$

a 41

b 62

c 69

d 71



26 In the opposite figure :

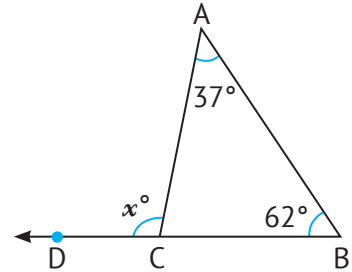
$x = \dots\dots\dots^\circ$

a 143

b 101

c 81

d 99



27 In the opposite figure :

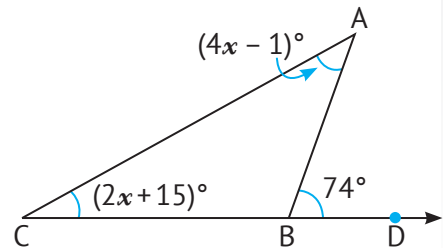
$x = \dots\dots\dots^\circ$

a 19

b 15

c 10

d 7



28 In the opposite figure :

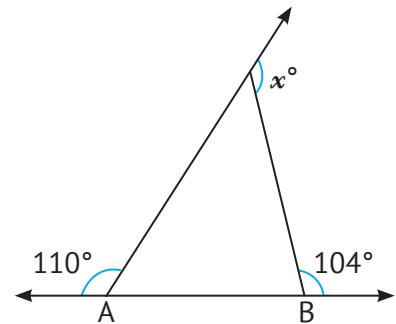
$x = \dots\dots\dots^\circ$

a 116

b 126

c 136

d 146



Second: Answer the following questions

- 1 Find the solution set of the equation: $2x + 4 = 10$, if the substitution set is $\{4, 5, 3\}$

.....

.....

.....

.....

.....

- 2 Find the solution set of the equation: $3x - 6 = 15$, if the substitution set is $\{6, 7, 8\}$

.....

.....

.....

.....

.....

- 3 Find the solution set of the following equations in N :

a $4 + 5x = 14$

.....

.....

.....

.....

.....

b $(x + 4) = 2$

.....

.....

.....

.....

.....

- 4 Find the solution set of the following equations in Z :

a $3x - 5 = 11$

.....

.....

.....

.....

.....

b $5x + 4 = -6$

.....

.....

.....

.....

.....

- 5 Find the solution set of the following equations in Q :

a $5x + 4 = -14$

.....

.....

.....

.....

.....

b $2x + 9 = 12$

.....

.....

.....

.....

.....

c $5(x - 4) = 20$

.....

.....

.....

.....

.....

d $4(x + 2) = 16$

.....

.....

.....

.....

.....

e $4 - 3x = 19$

.....

.....

.....

.....

.....

f $2x + 5 = 12 + 3x$

.....

.....

.....

.....

.....

- 6 If the perimeter of the opposite triangle equals 10 cm ,
then find the value of x in centimeters.

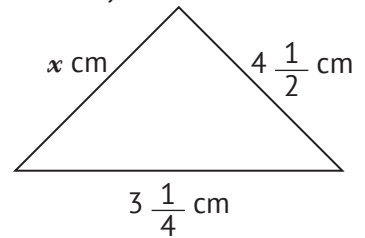
.....

.....

.....

.....

.....



- 7 If the perimeter of the opposite figure equals 35 cm
, then find the value of x in centimeters.

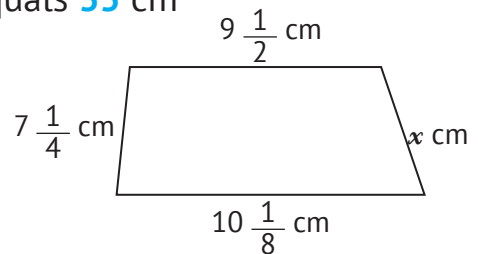
.....

.....

.....

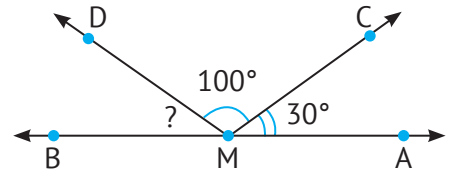
.....

.....



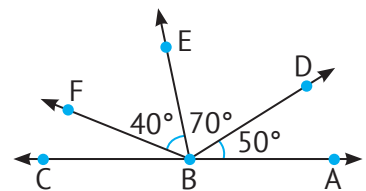
8 In the opposite figure : $M \in \overleftrightarrow{AB}$, $m(\angle AMC) = 30^\circ$

$m(\angle CMD) = 100^\circ$, find: $m(\angle DMB)$



9 In the opposite figure : $B \in \overleftrightarrow{AC}$,

find: $m(\angle FBC)$

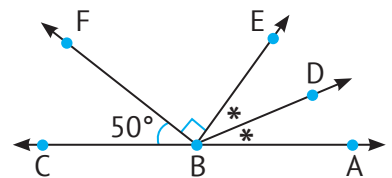


10 In the opposite figure : $m(\angle FBE) = 90^\circ$,

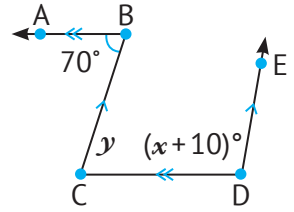
$B \in \overleftrightarrow{AC}$, $m(\angle CBF) = 50^\circ$,

$\overleftrightarrow{BD}$ bisects $\angle ABE$.

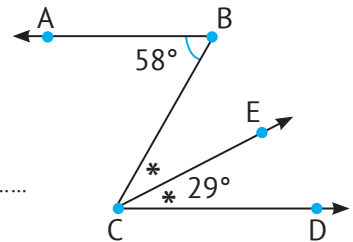
Find: $m(\angle ABD)$



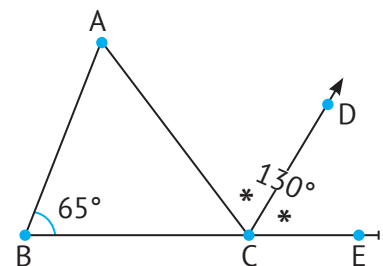
- 11 In the opposite figure : $\overrightarrow{BA} \parallel \overrightarrow{DC}$, $\overrightarrow{DE} \parallel \overrightarrow{CB}$,
 $m(\angle ABC) = 70^\circ$. Find the measure of each x and y



- 12 In the opposite figure : $\overrightarrow{CE}$ Bisect $\angle BCD$
 Prove that : $\overrightarrow{BA} \parallel \overrightarrow{DC}$



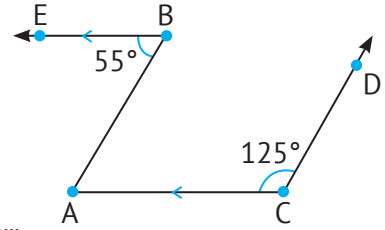
- 13 In the opposite figure : $\overrightarrow{CD}$ Bisect $\angle ACE$
 $m(\angle ACE) = 130^\circ$
 Prove that : $\overrightarrow{BA} \parallel \overrightarrow{CD}$



14 In the opposite figure :

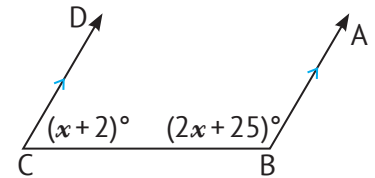
$\overrightarrow{CA} \parallel \overrightarrow{BE}$, $m(\angle B) = 55^\circ$, $m(\angle C) = 125^\circ$

Prove that: $\overrightarrow{AB} \parallel \overrightarrow{CD}$



15 In the opposite figure :

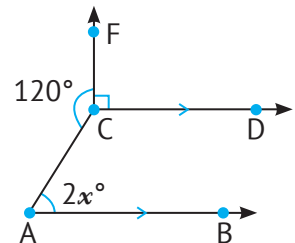
$\overrightarrow{CD} \parallel \overrightarrow{BA}$, Find the measure of x



16 In the opposite figure :

$\overrightarrow{CD} \parallel \overrightarrow{AB}$, $m(\angle ACF) = 120^\circ$, $m(\angle DCF) = 90^\circ$

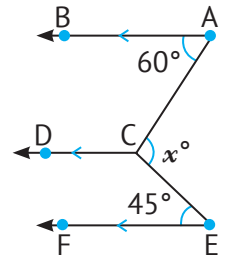
Find the measure of x



17 In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$, $m(\angle A) = 60^\circ$, $m(\angle E) = 45^\circ$

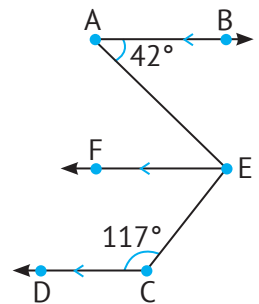
Find the measure of x



18 In the opposite figure: $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD} \parallel \overleftrightarrow{EF}$

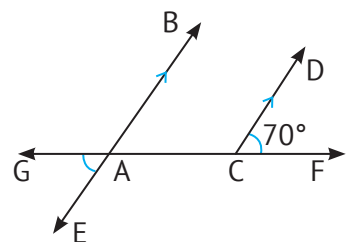
, $m(\angle A) = 42^\circ$, $m(\angle C) = 117^\circ$

Find by proof: $m(\angle AEC)$



19 In the opposite figure: $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$

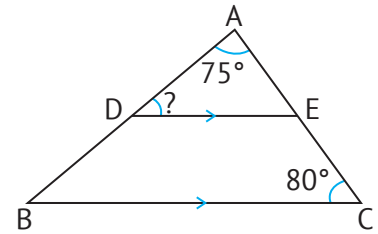
$m(\angle DCF) = 70^\circ$. Find by proof : $m(\angle GEA)$



20 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{BC}$,

$$m(\angle A) = 75^\circ, m(\angle C) = 60^\circ$$

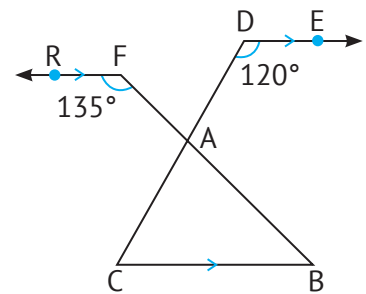
Find by proof: $m(\angle ADE)$



21 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{CB} \parallel \overleftrightarrow{FR}$

$$, m(\angle EDC) = 120^\circ, m(\angle RFB) = 135^\circ$$

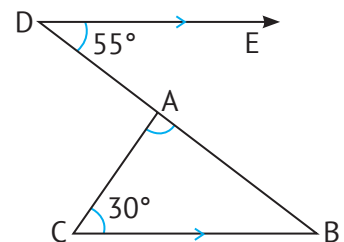
Find by proof the measures of the interior angles of the triangle ABC



22 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{CB}$

$$, m(\angle EDB) = 55^\circ, m(\angle C) = 30^\circ$$

Find by proof: $m(\angle BAC)$



- 23 Try to draw a triangle with 7cm, 5cm, 5cm sides. Do you can draw it?
Discuss?

.....

.....

.....

.....

.....

- 24 Try to draw a triangle with 8cm, 4cm, 3cm sides. Do you can draw it?
Discuss?

.....

.....

.....

.....

.....

- 25 Try to draw a triangle with 6cm, 4cm, 2cm sides. Do you can draw it?
Discuss?

.....

.....

.....

.....

.....

Guide Answers

First

- | | | |
|-----------------|-----------------|---------------|
| 1 35 | 2 24 | 3 3 |
| 4 $2x + 2 = 26$ | 5 $2x + 2 = 44$ | 6 290° |
| 7 $x + 10 = 35$ | 8 50° | 9 145° |
| 10 22° | 11 157° | 12 45° |
| 13 180° | 14 360° | 15 60° |
| 16 60° | 17 7 | 18 30 |
| 19 19 | 20 10 | 21 120 |
| 22 45 | 23 17 | 24 6 |
| 25 69 | 26 99 | 27 10 |
| 28 146 | | |

Second

- 1 At $x = 4$ $\therefore 2 \times 4 + 4 = 12$ does not solution
 At $x = 5$ $\therefore 2 \times 5 + 4 = 14$ does not solution
 At $x = 3$ $\therefore 2 \times 3 + 4 = 10$ is solution
 The solution set = $\{3\}$
- 2 At $x = 6$ $\therefore 3 \times 6 - 6 = 12$ does not solution
 At $x = 7$ $\therefore 3 \times 7 - 6 = 15$ is solution
 At $x = 8$ $\therefore 3 \times 8 - 6 = 18$ does not solution
 The solution set = $\{7\}$

3 a $5x + 4 - 4 = 14 - 4$

$$5x = 10$$

$$\frac{5x}{5} = \frac{10}{5} \quad \therefore x = 2 \in \mathbb{N}$$

$$\text{S.S.} = \{2\}$$

b $x + 4 - 4 = 2 - 4$

$$x = -2 \notin \mathbb{N}$$

$$\text{S.S.} = \emptyset$$

4 a $3x - 5 + 5 = 11 + 5$

$$3x = 16$$

$$\frac{3x}{3} = \frac{16}{3} \quad \therefore x = \frac{16}{3} \notin \mathbb{Z}$$

$$\text{S.S.} = \emptyset$$

b $5x + 4 - 4 = 6 - 4$

$$5x = -10$$

$$\frac{5x}{5} = \frac{-10}{5} \quad \therefore x = -2 \in \mathbb{Z}$$

$$\text{S.S.} = \{-2\}$$

5 a $5x + 4 - 4 = -14 - 4$

$$5x = -18$$

$$\frac{5x}{5} = \frac{-18}{5} \quad \therefore x = \frac{-18}{5} \in \mathbb{Q}$$

$$\text{S.S.} = \left\{\frac{-18}{5}\right\}$$

b $2x + 9 - 9 = 12 - 9$

$$2x = 3$$

$$\frac{2x}{2} = \frac{3}{2} \quad \therefore x = \frac{3}{2} \in \mathbb{Q}$$

$$\text{S.S.} = \left\{\frac{3}{2}\right\}$$

c $5x - 20 + 20 = 20 + 20$

$$5x = 40$$

$$\frac{5x}{5} = \frac{40}{5} \quad \therefore x = 8 \in \mathbb{Q}$$

$$\text{S.S.} = \{8\}$$

d $4x + 8 - 8 = 16 - 8$

$$4x = 8$$

$$\frac{4x}{4} = \frac{8}{4} \quad \therefore x = 2 \in \mathbb{Q}$$

$$\text{S.S.} = \{2\}$$

e $4 - 3x - 4 = 19 - 4$

$$-3x = 15$$

$$\frac{-3x}{-3} = \frac{15}{-3} \quad \therefore x = -5 \in \mathbb{Q}$$

$$\text{S.S.} = \{-5\}$$

f $2x + 5 - 5 = 12 + 3x - 5$

$$2x - 3x = 7 + 3x - 3x$$

$$-x = 7 \quad \therefore x = -7 \in \mathbb{Q}$$

$$\text{S.S.} = \{-7\}$$

6 $x + 4 \frac{1}{2} + 3 \frac{1}{4} = 10$

$$x + 7 \frac{3}{4} = 10$$

$$x = 10 - 7 \frac{3}{4} = 2 \frac{1}{4} \text{ cm}$$

$$7 \quad x + 9 \frac{1}{2} + 7 \frac{1}{4} + 10 \frac{1}{8} = 35$$

$$x + 26 \frac{7}{8} = 35$$

$$x = 35 - 26 \frac{7}{8} = 8 \frac{1}{8} \text{ cm}$$

$$8 \quad m(\angle AMC) + m(\angle CMD) + m(\angle DMB) = 180^\circ$$

$$\therefore m(\angle DMB) = 180^\circ - [100^\circ + 30^\circ] = 50^\circ$$

$$9 \quad m(\angle ABD) + m(\angle DBE) + m(\angle EBF) + m(\angle FBC) = 180^\circ$$

$$\therefore m(\angle FBC) = 180^\circ - [50^\circ + 70^\circ + 40^\circ] = 20^\circ$$

$$10 \quad m(\angle ABD) + m(\angle DBE) + m(\angle EBF) + m(\angle FBC) = 180^\circ$$

$$\therefore m(\angle ABD) + m(\angle DBE) = 180^\circ - [50^\circ + 90^\circ] = 40^\circ$$

$$\therefore m(\angle ABD) = m(\angle DBE) = 40^\circ \div 2 = 20^\circ$$

$$11 \quad \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$m(\angle ABC) = m(\angle BCD) = 70^\circ \quad \text{"Alternate angles"}$$

$$\therefore y = 70^\circ$$

$$\overrightarrow{DE} \parallel \overrightarrow{CB}$$

$$m(\angle CDE) + m(\angle BCD) = 180^\circ \quad \text{"Interior"}$$

$$m(\angle CDE) = 180^\circ - 70^\circ = 110^\circ$$

$$\therefore x + 10^\circ = 110^\circ \quad \therefore x = 100^\circ$$

$$12 \quad m(\angle BCD) = 2 \times 29^\circ = 58^\circ$$

$$\therefore m(\angle ABC) = m(\angle BCD) = 58^\circ$$

"They are Alternate angles"

$$\therefore \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$13 \quad m(\angle ECD) = 130^\circ \div 2 = 65^\circ$$

$$\therefore m(\angle ABC) = m(\angle ECD) = 65^\circ$$

"They are corresponding angles"

$$\therefore \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$14 \quad \overrightarrow{CA} \parallel \overrightarrow{BE}$$

$$m(\angle B) = m(\angle A) = 55^\circ \quad \text{"Alternate angles"}$$

$$m(\angle A) = m(\angle C) = 55^\circ + 125^\circ = 180^\circ$$

"They are interior"

$$\therefore \overrightarrow{AB} \parallel \overrightarrow{CD}$$

$$15 \quad \overrightarrow{CD} \parallel \overrightarrow{BA}$$

$$m(\angle B) + m(\angle$$

"Interior angles"

$$2x + 25^\circ + x + 2^\circ =$$

$$3x + 27^\circ = 180^\circ$$

$$3x + 27^\circ = 180^\circ$$

$$3x = 180^\circ - 27 = 153^\circ$$

$$x = 153^\circ \div 3 = 51^\circ$$

$$16 \quad m(\angle ACD) + m(\angle DCF) + m(\angle ACF) = 360^\circ$$

"accumulative angles"

$$\therefore m(\angle ACD) = 360^\circ - [120^\circ + 90^\circ] = 150^\circ$$

$$\overrightarrow{CD} \parallel \overrightarrow{AB}$$

$$m(\angle ACD) + m(\angle A) = 180^\circ$$

"Interior angles"

$$2x + 150^\circ = 180^\circ$$

$$2x = 180^\circ - 150^\circ = 30^\circ$$

$$\therefore x = 15^\circ$$

$$17 \quad \overrightarrow{CD} \parallel \overrightarrow{AB}$$

$$m(\angle ACD) + m(\angle A) = 180^\circ$$

"Interior angles"

$$\therefore m(\angle ACD) = 180^\circ - 60^\circ = 120^\circ$$

$$\overrightarrow{CD} \parallel \overrightarrow{EF}$$

$$m(\angle ECD) + m(\angle E) = 180^\circ$$

"Interior angles"

$$m(\angle ECD) = 180^\circ - 45^\circ = 135^\circ$$

$$\therefore m(\angle ECD) + m(\angle ACD) + m(\angle ACE) = 360^\circ$$

"accumulative"

$$\therefore m(\angle ACE) = 360^\circ - [120^\circ + 135^\circ] = 105^\circ$$

$$\therefore x = 105^\circ$$

$$18 \quad \overleftrightarrow{CD} \parallel \overleftrightarrow{AB}$$

$$m(\angle BAE) = m(\angle AEF) = 42^\circ$$

"Alternative angles"

$$\overleftrightarrow{CD} \parallel \overleftrightarrow{EF}$$

$$m(\angle ECD) + m(\angle CEF) = 180^\circ$$

"Interior angles"

$$\therefore m(\angle CEF) = 180^\circ - 117^\circ = 63^\circ$$

$$\therefore m(\angle AEC) = 42^\circ + 63^\circ = 105^\circ$$

$$19 \quad \overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$$

$$m(\angle BAC) = m(\angle DCF) = 70^\circ \quad \text{"Corresponding angles"}$$

$$m(\angle BAC) = m(\angle GAE) = 70^\circ$$

"V.O.A"

$$20 \quad \text{In } \triangle ABC$$

$$m(\angle A) + m(\angle B) + m(\angle C) = 180^\circ \quad \text{"interior angles"}$$

$$\therefore m(\angle B) = 180^\circ - [60^\circ + 75^\circ] = 45^\circ$$

$$\overleftrightarrow{DE} \parallel \overleftrightarrow{BC}$$

$$\therefore m(\angle ADE) = m(\angle B) = 45^\circ \quad \text{"corresponding angles"}$$

21 $\overrightarrow{DE} \parallel \overrightarrow{CB}$

$\therefore m(\angle CDE) + m(\angle C) = 180^\circ$ "Interior angles"

$m(\angle C) = 180 - 120^\circ = 60^\circ$

$\overleftrightarrow{FR} \parallel \overleftrightarrow{CB}$

$\therefore m(\angle BFR) + m(\angle B) = 180^\circ$ "Interior angles"

$m(\angle B) = 180 - 135^\circ = 45^\circ$

In $\triangle ABC$

$m(\angle BAC) + m(\angle B) + m(\angle C) = 180^\circ$ "interior angles"

$\therefore m(\angle BAC) = 180^\circ - [60^\circ + 45^\circ] = 75^\circ$

22 $\overrightarrow{DE} \parallel \overrightarrow{CB}$

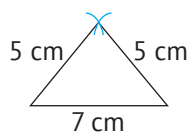
$\therefore m(\angle B) = m(\angle EDB) = 44^\circ$ "Alternate angles"

In $\triangle ABC$

$m(\angle BAC) = m(\angle B) + m(\angle C) = 180^\circ$ "Interior angles"

$\therefore m(\angle BAC) = 180^\circ - [55^\circ + 30^\circ] = 95^\circ$

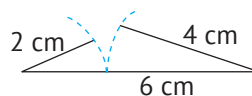
23 Yes, I can to draw because: $5 + 5 > 7$



24 No, I cannot draw because: $3 + 4 < 8$



25 No, I cannot draw because: $2 + 4 = 6$



حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر نوفمبر



Unit 2

Q1 Choose the correct answer :-

- 1) The constant term in the algebraic expression $2xy+3y-5$ is
- a) 5 b) $3y$ c) -5 d) $2xy$
- 2) The number of algebraic terms in $45 a b c$ is
- a) 1 b) 2 c) 3 d) 4
- 3) The like term to the term $a^2 b$ in the algebraic expression $b^2a-3ab+7ba^2$ is
- a) b^2a b) $-3ab$ c) $7ba^2$ d) None
- 4) $X + 5 > 6$ is
- a) algebraic expression b) equation c) inequality d) formula
- 5) The area of square = side $\times$ side is
- a) algebraic expression b) equation c) inequality d) formula
- 6) $a + a + a =$
- a) $3a$ b) $3 + a$ c) $3a^3$ d) a^3
- 7) $5x + (-3x) =$
- a) $8x$ b) $2x$ c) $-2x$ d) $-8x$
- 8) Which of the following pairs of terms are like terms ?
- a) $7x$, 7 b) x^2 , y^2 c) $3a$, $8a$ d) $2x$, $-2x^2$
- 9) If $a = 2b$, $b = 15$ then the numerical value of expression $a + 2b + 5 =$
- a) 40 b) 65 c) 35 d) 20

10) What is the algebraic expression equivalent to $2y + 5 - 4y - 6$?

- a) $2y + 1$ b) $-2y - 1$ c) $2y - 1$ d) $-2y + 1$

11) What is the simplest form of $7b + 4a - 2 - 2b + 3a + 2$?

- a) $5b + a + 2$ b) $5b + 7a$ c) $5b + a$ d) $9b + 7a + 4$

12) Which of the following doesn't equal $4a$?

- a) $4 + a$ b) $2a + 2a$ c) $a + a + a + a$ d) $a + 3a$

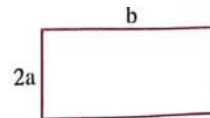
13) What is the mathematical formula of the area (A) of a parallelogram with base length (L) and corresponding height (h) ?

- a) $A = \frac{1}{2} L h$ b) $A = \frac{L}{h}$ c) Lh d) $L + h$

14) What is the suitable equation to find the side length of an equilateral triangle whose perimeter 12 cm ?

- a) $x + 3 = 12$ b) $3x = 12$ c) $x = 12$ d) $2x = 12$

15) What is the algebraic expression representing the perimeter of the following rectangle ?



- a) $b + 2a$ b) $a + 2b$ c) $4a + 2b$ d) $2ab$

16) what is the inequality expressing that the arithmetic mean of the two numbers X and Y is not less than 18

- a) $x + y > 18$ b) $x + y < 18$ c) $\frac{x+y}{2} \geq 18$ d) $\frac{x+y}{2} \leq 18$

17) + $(2x - 3y)$ = $-x + y - 4$

- a) $x - 2y - 4$ b) $-3x + 4y + 4$ c) $-4 - 3x + 4y$ d) $4y + 3x + 4$

18) The additive inverse of $7a - 2b + 9$ is

- a) $7a + 2b - 9$ b) $-7a + 2b - 9$ c) $-7a - 2b + 9$ d) $-7a + 2b + 9$

19) If $3(X-1) = 12$ then $5X =$

- a) 5 b) 10 c) 20 d) 25



- 20) If $2x = 2$, then $(3x-1) = \dots\dots\dots$
a) 1 b) 2 c) 3 d) 4
- 21) The consecutive two numbers whose sum is 29 , which of the following equation express that ?
a) $x+x+2=29$ b) $x+x+1=29$ c) $x+x-1=28$ d) $x+x+1=30$
- 22) Ziad is x years old now , seven years ago he was 18 years old , which of the following represent the situation ?
a) $x+7=18$ b) $x-7=11$ c) $x+7=25$ d) $x-7=18$
- 23) The solution set in $\mathbb{Z}$ for the equation $7-3x = x-3$ is
a) $\emptyset$ b) $\{2\}$ c) $\{2.5\}$ d) $\{3\}$
- 24) The solution set in $\mathbb{Q}$ $4(x-8) = 2x + 1$ for the equation is
a) $\emptyset$ b) $\{17\}$ c) $\{20\}$ d) $\{16\frac{1}{2}\}$
- 25) The solution set in $\mathbb{Q}$ $2(x-5) = 0$ for the equation
a) $\{5\}$ b) $\{0\}$ c) $\{-5\}$ d) $\{10\}$
- 26) Which of the following doesn't have a solution set in $\mathbb{Z}$?
a) $6x=12$ b) $6x=15$ c) $6x=24$ d) $6x=18$
- 27) If $5 = 3X - 1$, what is the value of $2X + 3$?
a) 2 b) 3 c) 5 d) 7

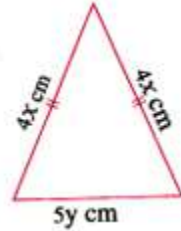
Q2 Complete the following :-

- 1) $-3y+5y-6$ in the simplest form is
- 2) The result of subtracting $2b$ from $5b$ is
- 3) The algebraic term that if added to $-7m$, the result will be $-9m$ is
- 4) The algebraic term that if subtracted from $8x$, the result will be $-4x$ is
- 5) The algebraic term $-3y$ exceeds the algebraic term $2y$ by
- 6) The algebraic term $8k$ is less than the algebraic term $-3k$ by
- 7) $-15x + 12x =$
- 8) $-x + 2y - 8y + 5x + 7 =$
- 9) $5k - 3(2k - 4) =$
- 10) Subtract $2x + 6y - 7$ from $2x - 5y + 2$
- 11) What is the increase of $7a - 8b + 4c$ than $-3a - 5c + b$?
- 12) What is the decrease of $-4x - 3y + 8$ than $7 + 3x + y$?
- 13) The solution set of the equation $2x + 1 = 5$ in Q is
- 14) The solution set of the equation $3x - 1 = 4$ in N is
- 15) If X is an integer , then the next even integer is
- 16) If the sum of two numbers is 15 , one of them is y then the other one is
- 17) Two integers whose difference is 7 , if the smaller one is m , then the larger one is
- 18) If the perimeter of square is (P) , then the side length is
- 19) If $\frac{m}{3} = 7$, then the value of $m - 19$ is
- 20) If $\frac{z+7}{3} = 2$, then the value of $4 - 3z$ is
- 21) When 5 is added to a number , the result is (-3) , the equation is
- 22) 15 is subtracted from twice a number the result is 12 , the equation is

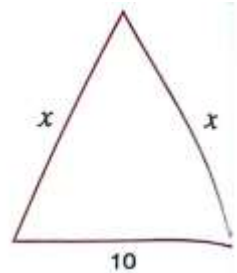
Q3 Answer the following :-

1) From the opposite figure :-

- Mathematical expression that represents the perimeter is
- simplest form
- numerical value of the perimeter at $y=2$ $x=3$ is



2) The perimeter of the opposite triangle is 34 cm , then what is the value of x .



3) The length of a rectangle exceeds width by 7 meters , if the perimeter is 66 meters , find dimensions.

4) Two natural numbers , one of them is three times the other and their sum is 60 , what are the two numbers ?

5) What is the number , that if it is subtracted from three times itself the result will be 14 ?

6) The sum of three consecutive odd numbers is 87 , what are these numbers

Unit 4 geometry

Q1 Choose the correct answer :-

- 1) If A supplements B and A supplements C , then B and C are
a) supplementary b) complementary c) adjacent d) equal in measure
- 2) If $m(\angle A) = (\angle B)$ and $\angle A$ supplements $\angle B$, then what is the measure of $\angle B$
a) 30° b) 45° c) 60° d) 90°
- 3) If $BA \perp BC$, what is the measure of angle $\angle ABC$
a) 40° b) 90° c) 180° d) 360°
- 4) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
a) right angle b) 2 right angles c) 3 right angles d) 4 right angles
- 5) The angle of measure 60° has a vertically opposite angle with a measure of
a) 30° b) 45° c) 60° d) 90°
- 6) The sum of measures of angles around a point equals the sum of
a) 5 right angle b) 2 right angles c) 3 right angles d) 4 right angles
- 7) The sum of measures of 4 angles around a point is the sum of measures of 5 angles around a point .
a) $<$ b) $>$ c) $=$ d) $\neq$
- 8) If the ratio among three angles around a point is $4 : 3 : 2$ then the measure of the greatest angle is
a) 40° b) 80° c) 120° d) 160°

- 9) If the sum of the measures of two angles in triangle is 150° then what is the measure of the third angle ?
a) 40° b) 30° c) 50° d) 20°
- 10) The sum of measures of the interior angles of a triangle equals the measure of
a) a right angle b) a straight angle c) a reflex angle d) an acute angle
- 11) The triangle consists of two angles at least .
a) right b) straight c) reflex d) acute
- 12) Which of the following sets of numbers cannot be used as side lengths of a triangle ?
a) 4cm,7cm,7cm b) 3cm,4cm,7cm c) 7cm,7cm,7cm d) 9cm,7cm,5cm
- 13) The lengths of of two sides of an isosceles tringle are 3cm and 7cm , what is the length of the third side ?
a) 3cm b) 7cm c) 5cm d) 5cm
- 14) The sum of lengths of any two sides in a triangle the lengths of the third side .
a) smaller than b) greater than c) half d) equal

Q2 Complete the following :-

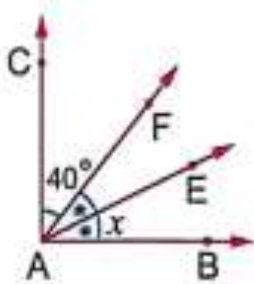
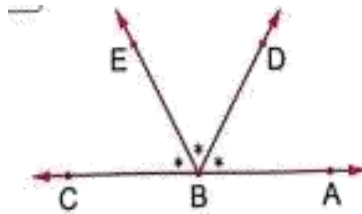
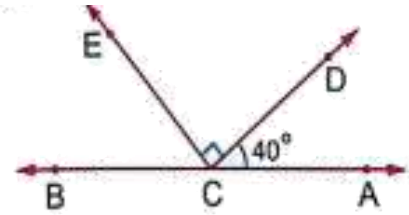
- 1) The two adjacent angles whose outer sides are perpendicular are
- 2) The two adjacent angles whose outer sides lie on a straight line are
- 3) If the adjacent angles are supplementary , their outer sides are
- 4) If $m(\angle A) = 50^\circ$, then $m(\text{reflex } \angle A) = \dots\dots^\circ$
- 5) The angle that measures 50° complements an angle whose measure is $\dots\dots^\circ$ and supplements an angle whose measure is $\dots\dots^\circ$
- 6) An acute angle is complemented by an angle that is a and supplemented by an angle that is
- 7) A zero angle is complemented by an angle that is a and supplemented by an angle that is
- 8) A right angle is complemented by an angle that is a and supplemented by an angle that is
- 9) An obtuse angle supplements an angle that is
- 10) If $m(\angle A) = 30^\circ$ and $(\angle A)$ complements $(\angle B)$ then $m(\text{reflex } \angle B) = \dots\dots^\circ$
- 11) Complementary angles that are equal in measure have a measure of $\dots\dots^\circ$
- 12) If $\angle A$ and $\angle B$ are supplementary angles and $m(\angle A) = 2 m(\angle B)$ then $m(\angle B) = \dots\dots^\circ$
- 13) If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$ then $m(\angle B) = \dots\dots^\circ$
- 14) If a straight line perpendicular to one of two parallel straight lines then it is to other in the plane.
- 15) If two straight lines are parallel to a third straight line , then they are



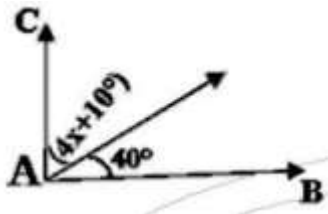
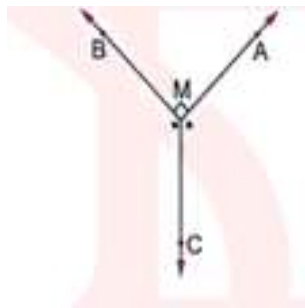
- 16) If a straight line intersects two parallel straight lines , then any two alternate angles are
- 17) If a straight line intersects two parallel straight lines , then any two corresponding angles are
- 18) If a straight line intersects two parallel straight lines , then any two interior angles are
- 19) The sum of measures of the interior angles of a triangle =^o
- 20) The measure of the exterior angle of any triangle equals the sum of
- 21) In triangle ABC , if $m(\angle A) = 70^{\circ}$ and $m(\angle B) = 50^{\circ}$, then $m(\angle C) = \dots\dots^{\circ}$
- 22) If the measures of the three angles in a triangle are equal , then the measure of each angle is^o
- 23) If the length of two sides of triangle are 5cm and 2cm , then the largest integer that can represent the length of the third side is
- 24) If the length of two sides of triangle are 5cm and 7cm , then the smallest integer that can represent the length of the third side is

Q3 Answer the following :-

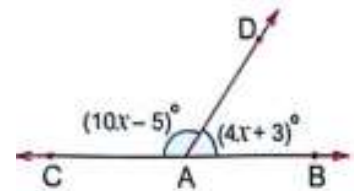
1) find value of X

2) find $m(\angle CBE)$ 3) find $m(\angle ECB)$ 

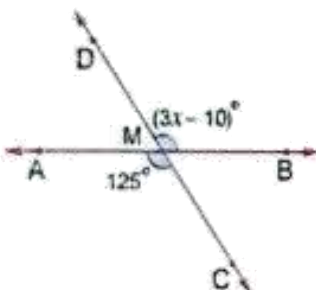
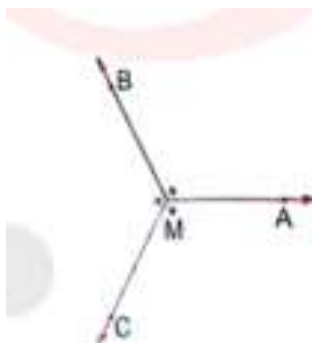
4) find value of X

5) find $m(\angle BMC)$ 

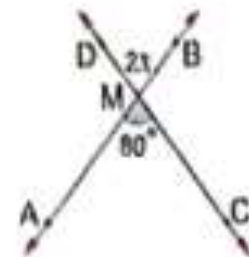
6) find value of X



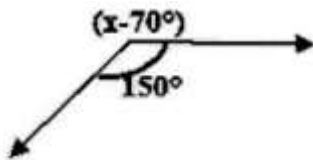
7) find value of X

8) find $m(\angle BMA)$ 

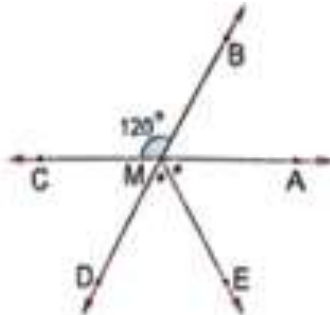
9) find value of X



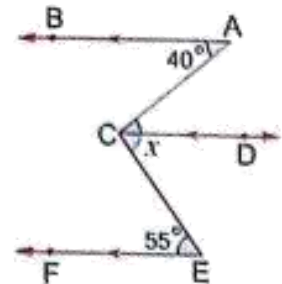
10) find value of X



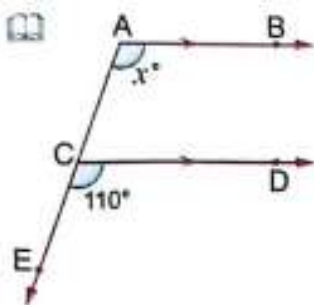
11) find $m(\angle BMA)$



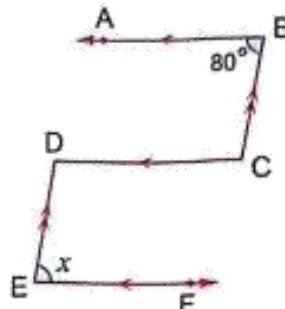
12) find value of X



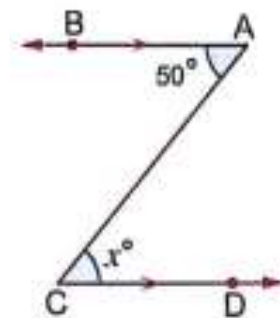
13) find value of X



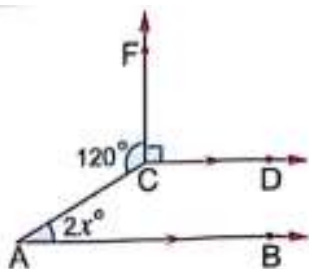
14) find value of X



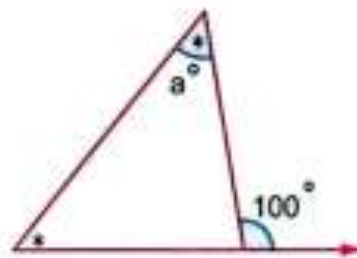
15) find value of X



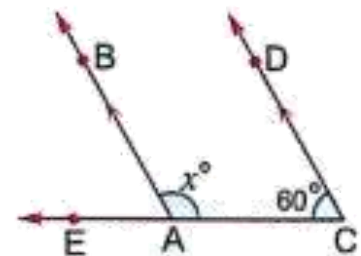
16) find value of X



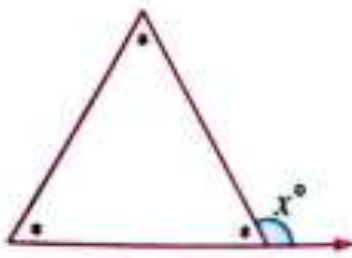
17) find value of a



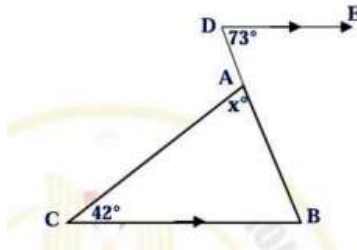
18) find value of X



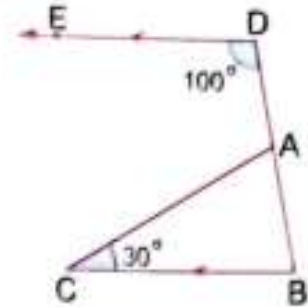
19) find value of x



20) find value of x



21) find $m(\angle CAB)$



Q1 Choose the correct answer :-

- 1) The constant term in the algebraic expression $2xy+3y-5$ is
 a) 5 b) $3y$ c) **-5** d) $2xy$
- 2) The number of algebraic terms in $45 a b c$ is
 a) **1** b) 2 c) 3 d) 4
- 3) The like term to the term $a^2 b$ in the algebraic expression $b^2a-3ab+7ba^2$ is
 a) b^2a b) $-3ab$ c) **$7ba^2$** d) None
- 4) $X + 5 > 6$ is
 a) algebraic expression b) equation c) **inequality** d) formula
- 5) The area of square = side $\times$ side is
 a) algebraic expression b) equation c) inequality d) **formula**
- 6) $a + a + a =$
 a) **$3a$** b) $3 + a$ c) $3a^3$ d) a^3
- 7) $5x + (-3x) =$
 a) $8x$ b) **$2x$** c) $-2x$ d) $-8x$
- 8) Which of the following pairs of terms are like terms ?
 a) $7x$, 7 b) x^2 , y^2 c) **$3a$, $8a$** d) $2x$, $-2x^2$
- 9) If $a = 2b$, $b = 15$ then the numerical value of expression $a + 2b + 5 =$
 a) 40 b) **65** c) 35 d) 20

10) What is the algebraic expression equivalent to $2y + 5 - 4y - 6$?

- a) $2y + 1$ b) $-2y - 1$ c) $2y - 1$ d) $-2y + 1$

11) What is the simplest form of $7b + 4a - 2 - 2b + 3a + 2$?

- a) $5b + a + 2$ b) $5b + 7a$ c) $5b + a$ d) $9b + 7a + 4$

12) Which of the following doesn't equal $4a$?

- a) $4 + a$ b) $2a + 2a$ c) $a + a + a + a$ d) $a + 3a$

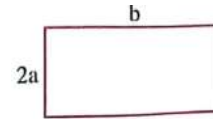
13) What is the mathematical formula of the area (A) of a parallelogram with base length (L) and corresponding height (h)?

- a) $A = \frac{1}{2} L h$ b) $A = \frac{L}{h}$ c) Lh d) $L + h$

14) What is the suitable equation to find the side length of an equilateral triangle whose perimeter 12 cm?

- a) $x + 3 = 12$ b) $3x = 12$ c) $x = 12$ d) $2x = 12$

15) What is the algebraic expression representing the perimeter of the following rectangle?



- a) $b + 2a$ b) $a + 2b$ c) $4a + 2b$ d) $2ab$

16) what is the inequality expressing that the arithmetic mean of the two numbers X and Y is not less than 18

- a) $x + y > 18$ b) $x + y < 18$ c) $\frac{x+y}{2} \geq 18$ d) $\frac{x+y}{2} \leq 18$

17) + $(2x - 3y) = -x + y - 4$

- a) $x - 2y - 4$ b) $-3x + 4y + 4$ c) $-4 - 3x + 4y$ d) $4y + 3x + 4$

18) The additive inverse of $7a - 2b + 9$ is

- a) $7a + 2b - 9$ b) $-7a + 2b - 9$ c) $-7a - 2b + 9$ d) $-7a + 2b + 9$

19) If $3(X-1) = 12$ then $5X =$

- a) 5 b) 10 c) 20 d) 25



20) If $2x = 2$, then $(3x-1) = \dots\dots\dots$

- a) 1 b) 2 c) 3 d) 4

21) The consecutive two numbers whose sum is 29 , which of the following equation express that ?

- a) $x+x+2=29$ b) $x+x+1=29$ c) $x+x-1=28$ d) $x+x+1=30$

22) Ziad is x years old now , seven years ago he was 18 years old , which of the following represent the situation ?

- a) $x+7=18$ b) $x-7=11$ c) $x+7=25$ d) $x-7=18$

23) The solution set in Z for the equation $7-3x = x-3$ is

- a) $\emptyset$ b) $\{2\}$ c) $\{2.5\}$ d) $\{3\}$

24) The solution set in Q $4(x-8) = 2x + 1$ for the equation is

- a) $\emptyset$ b) $\{17\}$ c) $\{20\}$ d) $\{16\frac{1}{2}\}$

25) The solution set in Q $2(x-5) = 0$ for the equation

- a) $\{5\}$ b) $\{0\}$ c) $\{-5\}$ d) $\{10\}$

26) Which of the following doesn't have a solution set in Z ?

- a) $6x=12$ b) $6x=15$ c) $6x=24$ d) $6x=18$

27) If $5 = 3X - 1$, what is the value of $2X + 3$?

- a) 2 b) 3 c) 5 d) 7

Q2 Complete the following :-

- 1) $-3y+5y-6$ in the simplest form is $2y-6$
- 2) The result of subtracting $2b$ from $5b$ is $3b$
- 3) The algebraic term that if added to $-7m$, the result will be $-9m$ is $-2m$
- 4) The algebraic term that if subtracted from $8x$, the result will be $-4x$ is $12x$
- 5) The algebraic term $-3y$ exceeds the algebraic term $2y$ by $-5y$
- 6) The algebraic term $8k$ is less than the algebraic term $-3k$ by $-11k$
- 7) $-15x + 12x = -3x$
- 8) $-x + 2y - 8y + 5x + 7 = 4x - 6y + 7$
- 9) $5k - 3(2k - 4) = -k + 12$
- 10) Subtract $2x + 6y - 7$ from $2x - 5y + 2 = -11y + 9$
- 11) What is the increase of $7a - 8b + 4c$ than $-3a - 5c + b$? $10a - 9b + 9c$
- 12) What is the decrease of $-4x - 3y + 8$ than $7 + 3x + y$? $7x + 4y - 1$
- 13) The solution set of the equation $2x + 1 = 5$ in Q is $\{2\}$
- 14) The solution set of the equation $3x - 1 = 4$ in N is $\emptyset$
- 15) If X is an integer , then the next even integer is $x + 2$
- 16) If the sum of two numbers is 15 , one of them is y then the other one is $15 - y$
- 17) Two integers whose difference is 7 , if the smaller one is m , then the larger one is $m + 7$
- 18) If the perimeter of square is (P) , then the side length is $P \div 4$
- 19) If $\frac{m}{3} = 7$, then the value of $m - 19$ is 2
- 20) If $\frac{z+7}{3} = 2$, then the value of $4 - 3z$ is 7
- 21) When 5 is added to a number , the result is (-3) , the equation is $5 + x = -3$
- 22) 15 is subtracted from twice a number the result is 12 , the equation is $2x - 15 = 12$

Q3 Answer the following :-

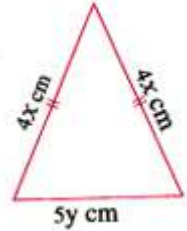
1) From the opposite figure

a. Mathematical expression that represents the perimeter is

$$4x + 4x + 5y$$

b. simplest form $8x + 5y$

c. numerical value of the perimeter at $y=2$ $x=3$ is 34



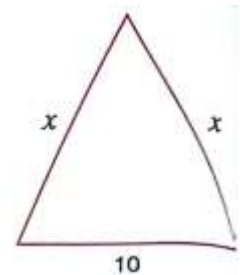
2) The perimeter of the opposite triangle is 34 cm , then

what is the value of x ? $x + x + 10 = 34$

$$2x + 10 = 34$$

$$2x = 24$$

$$x = 12$$



3) The length of a rectangle exceeds width by 7 meters , if the perimeter is 66 meters , find dimensions.

Suppose width is X , then length is $X + 7$

$$\text{Perimeter} = 2 \times (L+W)$$

$$2 \times (L+W) = 66$$

$$(L+W) = 66 \div 2 = 33$$

$$X + X + 7 = 33$$

$$2X + 7 = 33$$

$$2X = 33 - 7 = 26$$

$$X = 26 \div 2 = 13 \quad \text{so} \quad L = 13m, W = 13+7 = 20m$$

- 4) Two natural numbers , one of them is three times the other and their sum is 60 , what are the two numbers ?

Suppose the 1st is X so the 2nd is $3X$

$$X + 3X = 60$$

$$4X = 60$$

$$X = 60 \div 4 = 15 \quad \text{so} \quad 1^{\text{st}} = 15, 2^{\text{nd}} = 15 \times 3 = 45$$

- 5) What is the number , that if it is subtracted from three times itself the result will be 14 ?

Suppose the 1st is X

$$3X - X = 14$$

$$2X = 14$$

$$X = 14 \div 2 = 7 \quad \text{so} \quad \text{the number is } 7$$

- 6) The sum of three consecutive odd numbers is 87 , what are these numbers

Suppose the 1st is X so the 2nd is $X+2$, 3rd is $X+4$

$$X + X + 2 + X + 4 = 87$$

$$3X + 6 = 87$$

$$3X = 87 - 6 = 81$$

$$3X = 81$$

$$X = 81 \div 3 = 27$$

so three numbers are 27 , 29 , 31

Unit 4 geometry

Q1 Choose the correct answer :-

- 1) If A supplements B and A supplements C , then B and C are
a) supplementary b) complementary c) adjacent **d) equal in measure**
- 2) If $m(\angle A) = (\angle B)$ and $\angle A$ supplements $\angle B$, then what is the measure of $\angle B$
a) 30° b) 45° c) 60° **d) 90°**
- 3) If $BA \perp BC$, what is the measure of angle $\angle ABC$
a) 40° **b) 90°** c) 180° d) 360°
- 4) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
a) right angle b) 2 right angles c) 3 right angles **d) 4 right angles**
- 5) The angle of measure 60° has a vertically opposite angle with a measure of
a) 30° b) 45° **c) 60°** d) 90°
- 6) The sum of measures of angles around a point equals the sum of
a) 5 right angle b) 2 right angles c) 3 right angles **d) 4 right angles**
- 7) The sum of measures of 4 angles around a point is the sum of measures of 5 angles around a point .
a) $<$ b) $>$ **c) $=$** d) $\neq$
- 8) If the ratio among three angles around a point is $4 : 3 : 2$ then the measure of the greatest angle is
a) 40° b) 80° c) 120° **d) 160°**

- 9) If the sum of the measures of two angles in triangle is 150° then what is the measure of the third angle ?
a) 40° **b) 30°** c) 50° d) 20°
- 10) The sum of measures of the interior angles of a triangle equals the measure of
a) a right angle **b) a straight angle** c) a reflex angle d) an acute angle
- 11) The triangle consists of two angles at least .
a) right b) straight c) reflex **d) acute**
- 12) Which of the following sets of numbers cannot be used as side lengths of a triangle ?
a) 4cm,7cm,7cm **b) 3cm,4cm,7cm** c) 7cm,7cm,7cm d) 9cm,7cm,5cm
- 13) The lengths of of two sides of an isosceles tringle are 3cm and 7cm , what is the length of the third side ?
a) 3cm **b) 7cm** c) 5cm d) 5cm
- 14) The sum of lengths of any two sides in a triangle the lengths of the third side .
a) smaller than **b) greater than** c) half d) equal

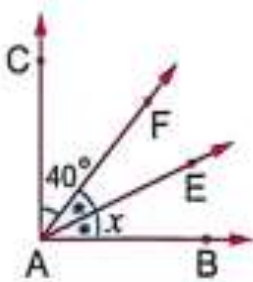
Q2 / Complete the following :-

- 1) The two adjacent angles whose outer sides are perpendicular are complementary
- 2) The two adjacent angles whose outer sides lie on a straight line are supplementary
- 3) If the adjacent angles are supplementary, their outer sides are on a straight line
- 4) If $m(\angle A) = 50^\circ$, then $m(\text{reflex } \angle A) = 310^\circ$
- 5) The angle that measures 50° complements an angle whose measure is 40° and supplements an angle whose measure is 130°
- 6) An acute angle is complemented by an angle that is an acute and supplemented by an angle that is obtuse
- 7) A zero angle is complemented by an angle that is a right and supplemented by an angle that is straight
- 8) A right angle is complemented by an angle that is a zero and supplemented by an angle that is right
- 9) An obtuse angle supplements an angle that is acute
- 10) If $m(\angle A) = 30^\circ$ and $(\angle A)$ complements $(\angle B)$ then $m(\text{reflex } \angle B) = 300^\circ$
- 11) Complementary angles that are equal in measure have a measure of 45°
- 12) If $\angle A$ and $\angle B$ are supplementary angles and $m(\angle A) = 2 m(\angle B)$ then $m(\angle B) = 60^\circ$
- 13) If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$ then $m(\angle B) = 54^\circ$
- 14) If a straight line perpendicular to one of two parallel straight lines then it is perpendicular to other in the plane.

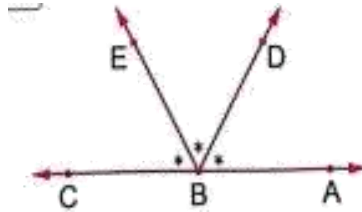
- 15)** If two straight lines are parallel to a third straight line , then they are parallel
- 16)** If a straight line intersects two parallel straight lines , then any two alternate angles are equal in measure
- 17)** If a straight line intersects two parallel straight lines , then any two corresponding angles are equal in measure
- 18)** If a straight line intersects two parallel straight lines , then any two interior angles are supplementary
- 19)** The sum of measures of the interior angles of a triangle = 180°
- 20)** The measure of the exterior angle of any triangle equals the sum of two non adjacent angles
- 21)** In triangle ABC , if $m(\angle A) = 70^\circ$ and $m(\angle B) = 50^\circ$, then $m(\angle C) = 60^\circ$
- 22)** If the measures of the three angles in a triangle are equal , then the measure of each angle is 60°
- 23)** If the length of two sides of triangle are 5cm and 2cm , then the largest integer that can represent the length of the third side is 6cm
- 24)** If the length of two sides of triangle are 5cm and 7cm , then the smallest integer that can represent the length of the third side is 3cm

Q3 Answer the following :-

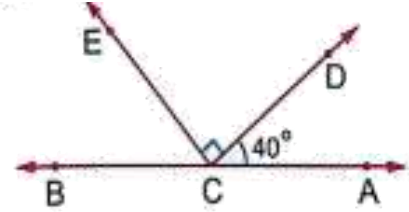
1) find value of X
=25



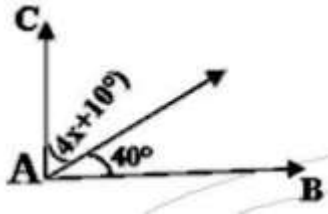
2) find $m(\angle CBE)$
=60°



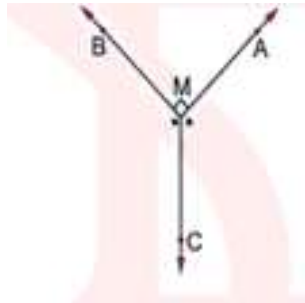
3) find $m(\angle ECB)$
=50°



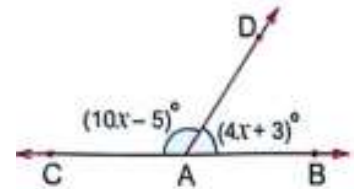
4) find value of X
=10



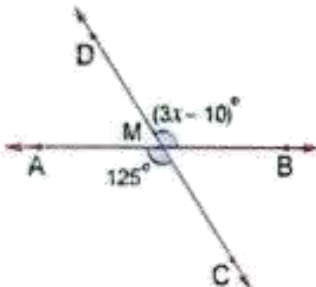
5) find $m(\angle BMC)$
=135°



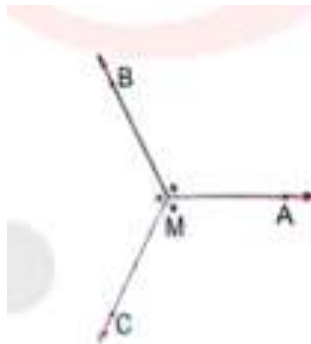
6) find value of X
=13



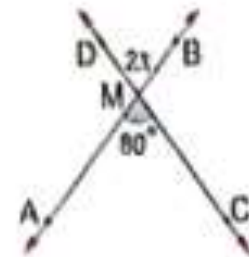
7) find value of X
=45



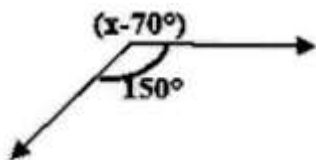
8) find $m(\angle BMA)$
=120°



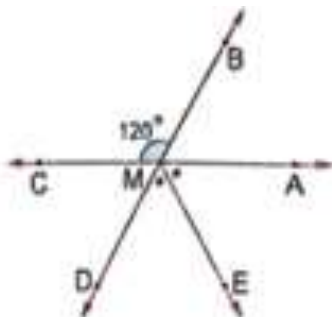
9) find value of X
=40°



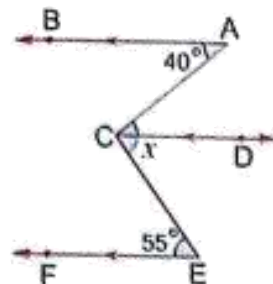
10) find value of X
=280



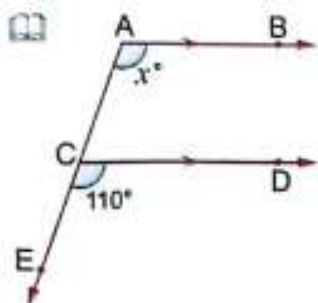
11) find m ($\angle AME$)
=60°



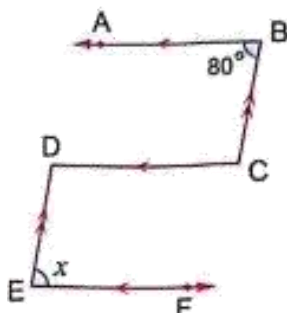
12) find value of X
=40+55=95



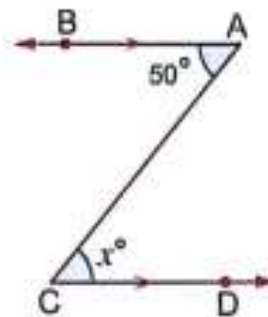
13) find value of X
=110°



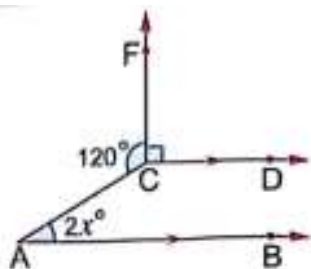
14) find value of X
=80



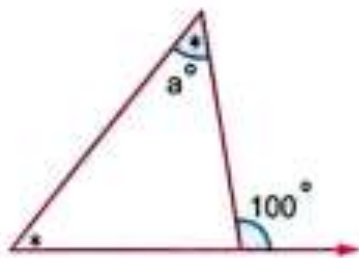
15) find value of X
=50°



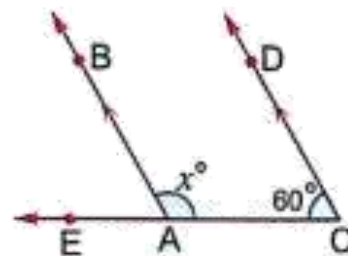
16) find value of X
=15



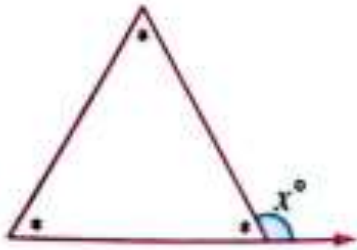
17) find value of a
=50°



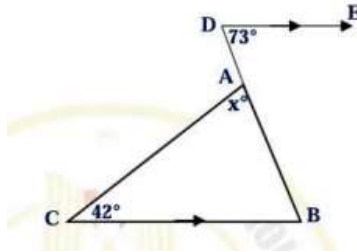
18) find value of X
=120°



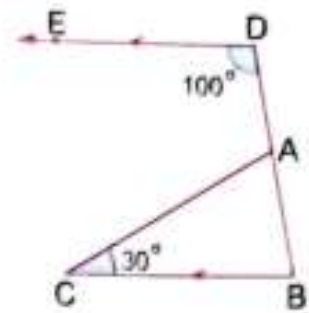
19) find value of X
 $= 120^\circ$



20) find value of X
 $= 65^\circ$



21) find $m(\angle CAB)$
 $= 50^\circ$



o

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر نوفمبر



Q1: Choose the correct answer

1 If $2ab = 10$, then $3ab = \dots\dots\dots$ ☐ a 5☐ b 6☐ c 15☐ d 302 The solution set of the equation $4x = -12$ in N is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{3\}$ ☐ c $\emptyset$ ☐ d $\{0\}$ 3 The additive inverse of $x - 5$ is $\dots\dots\dots$ ☐ a $x - 5$ ☐ b $-x - 5$ ☐ c $-x + 5$ ☐ d 54 $2x = 2$, then $3x - 1 = \dots\dots\dots$ ☐ a 2☐ b 3☐ c 4☐ d 55 If $5x + 8x + 2x + 4x = 114$, then $5x + 3 = \dots\dots\dots$ ☐ a 33☐ b 35☐ c 47☐ d $8x$ 6 $7x + 5y + z$ increases $2x - y + z$ by $\dots\dots\dots$ ☐ a $5x + 4y + 2z$ ☐ b $5x + 6y$ ☐ c $9x + 4y$ ☐ d $9x - 6y - 2z$ 7 If $x + 3 = 5$, $x \in Z^-$, Then the solution set is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{5\}$ ☐ c $\{-5\}$ ☐ d $\emptyset$ 8 The sum of $x + 2y - 3z$ and $-2y - x - 3z$ is $\dots\dots\dots$ ☐ a $-6z$ ☐ b zero☐ c $6z$ ☐ d $2x - 4y + 6z$ 9 If $x + 2 = |-4|$, then $x = \dots\dots\dots$ ☐ a -2☐ b 2☐ c 6☐ d -610 Which of the following equations is equivalent to the equation $x + 3 = 12$ ☐ a $x - 3 = -12$ ☐ b $x + (-3) = 12$ ☐ c $x - (-3) = 12$ ☐ d $x - (-3) = -12$ 

11 Which of the following algebraic terms is like the algebraic term $2x^2y^2$?

(a) $2y^2x$

(b) yx^2

(c) $2x^2$

(d) x^2y^2

12 $4x$ increases ($-4x$) by

(a) zero

(b) $8x$

(c) $-8x$

(d) $16x$

13 $k + k + k = \dots\dots\dots$

(a) k^3

(b) $3k$

(c) $3k^3$

(d) $k + 3$

14 $2x^2 + 4x^2 = \dots\dots\dots$

(a) $6x^4$

(b) $6x^2$

(c) $8x^2$

(d) $8y^4$

15 The expression: $2x + 3y$ exceeds $3y - 2x$ by

(a) $-6y$

(b) $-4x$

(c) $4x$

(d) $6y$

16 The result of subtracting $7a$ from $15a$ is

(a) $-8a$

(b) $8a$

(c) $8a^2$

(d) $-22a$

17 The solution set of the equation: $2(x - 4) = 0$ in Q is

(a) $\{-4\}$

(b) $\{4\}$

(c) $\{0\}$

(d) $\{8\}$

18 Which of the following equations has no solution in Z ?

(a) $6x = 24$

(b) $6x = 15$

(c) $6x = 18$

(d) $6x = 12$

19 If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is

(a) $\{5\}$

(b) $\{2\}$

(c) $\{1\}$

(d) $\emptyset$

20 Two consecutive odd numbers add up to 28. Which of the following equations expresses this?

(a) $x + x + 1 = 28$

(b) $2x + 1 = 28$

(c) $2x - 1 = 28$

(d) $2x + 2 = 28$



Q2: Answer The Following

- 1 Add the expressions: $3a - 2b$ and $2a + 5b$ then find the numerical values of the result when $a = 2$ and $b = 1$.

- 2 Simplify: $5(a - 2b) + 3(4a + b)$ in its simplest form

- 3 $2a^2 - 3ab - 5b^2$ decreases $4a^2 + 3b^2 + ab$ by

- 4 The coefficient of the algebraic term $-3k^3$ is

- 5 The perimeter of the rectangle whose dimensions are $7y$, $4y$ is

- 6 The decrease of $-3ab$ than $2ab$ is

- 7 $5a^2b - \dots = 7a^2b$

- 8 $5x$ increases $(-5x)$ by

- 9 Write the following expressions in the simplest form:

Ⓐ $-5x - 7y - 7x - 2y + 7y - 3x$

Ⓑ $2(3x - 4) - 3(x - 2)$

- 10 Find in Z the solution set of the equation: $2x - 5 = -17$



11 Find the S.S of the following equations in Q:

a $4(x + 1) = 2(x - 1)$

b $3x + 6 = 30 - 5x$

c $3y + 6(y + 3) - (8y - 16) = 66$

d $a + 5a - 2 = 2(3 - a)$

12 Two integer numbers their difference is 12 and the smaller is m, then the greater is

13 A parallelogram with a base length of 12 cm. Its corresponding height is $(3x - 1)$ cm and its area is 60 squared centimeter, then $x = \dots\dots\dots$

14 If $x + 9 = 11$, then the value of: $7x = \dots\dots\dots$

15 $2(x + 3) = 20$, Then the value of $x = \dots\dots\dots$

16 The difference between two natural numbers is 5 and their sum is 21
What are the two numbers ?

17 The solution set of $3x - 1 = 2x + 5$, where $x \in \mathbb{N}$ is

18 The number when added to its triple becomes 72 is

19 If x is an odd number, then the next odd number to it is

20 The solution set in $\mathbb{N}$ of $7.4 - y = 2.4$ is

21 The set of substitution is $\{1, 2, 3, 4\}$, then the set of solution of the equation $x + 6 = 10$ is



22 Find the S.S of the following equations in N:

a $6x - 2x + 7 = 4$

b $4(x - 1) = 3(x + 1)$

c $-2(x + 1) = 3$

d $3(x - 2) = 5x - 10$

23 Three consecutive numbers whose sum is 213, what are there numbers?

24 Find in Z the solution set of the equation: $3x + 5 = 17$

25 If: $5n = 20$ find the value of: $8 - 2n$

26 If $(x + 1)$ is the additive inverse of (-2) , then $x = \dots\dots\dots$

27 Two integers, their sum is 5, if one of them is x , then the other one is $\dots\dots\dots$

28 Express the following situation with a suitable equation:
The sum of two consecutive odd integers is 32

29 Three consecutive numbers whose sum is 102, what are the numbers?



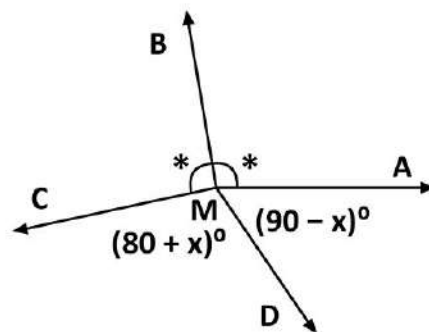
Q1: Choose the correct answer

- 1 The sum of the measures of 4 angles around a point is the sum of the measures of 5 angles around a point.

(a) $>$ (b) $=$ (c) $<$ (d) $\geq$

- 2 In the opposite figure:

What is the measure of $\angle AMB$?

(a) 190° (b) 95° (c) 90° (d) 80° 

- 3 The sum of supplementary angles equals the sum of the measures of angles.

(a) 2 right

(b) 4 right

(c) 3 right

(d) 5 right

- 4 If angle measure Y complements an angle of measure

(a) $180^\circ - Y$ (b) $90^\circ - Y$ (c) $180^\circ + Y$ (d) $90^\circ + Y$

- 5 The zero angle complements angle.

(a) zero

(b) acute

(c) obtuse

(d) right

- 6 The angle of measure 179° is a/an angle

(a) acute

(b) straight

(c) obtuse

(d) right

- 7 If $\angle X$ complements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, then $m(\angle Y) = \dots\dots\dots$

(a) 45° (b) 30° (c) 60° (d) 90°

- 8 Obtuse angle supplements angle.

(a) acute

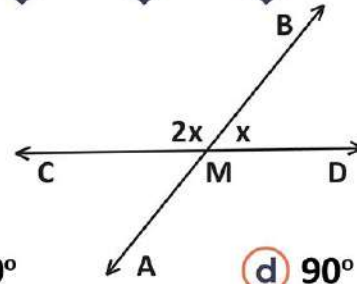
(b) straight

(c) obtuse

(d) right



- 9 If two straight lines AB and CD intersect at M, then $m(\angle AMC) = \dots\dots\dots$



- (a) 30° (b) 45° (c) 60° (d) 90°

- 10 If the ratio of two supplementary angles is 5 : 13, then the measure of the smaller angle is

- (a) 50° (b) 130° (c) 150° (d) 180°

- 11 The sum of accumulative angles at a point equals the sum of the measures of angles.

- (a) 2 rights (b) 4 rights
(c) 3 rights (d) 5 right

- 12 If the ratio of measures of three accumulative angles 5 : 3 : 4, Then the measure of the greatest angle is $^\circ$.

- (a) 30° (b) 150° (c) 180° (d) 90°

- 13 If the ratio of two complementary angles is 7 : 11, then the measure of the smaller angle is

- (a) 145° (b) 190° (c) 90° (d) 35°

- 14 If the two vertically angles are complementary angles, the the measure of each angle is

- (a) 45° (b) 50° (c) 180° (d) 90°

- 15 If two straight lines intersect, then each two vertically angles are

- (a) supplementary (b) adjacent
(c) equal in measure (d) complementary



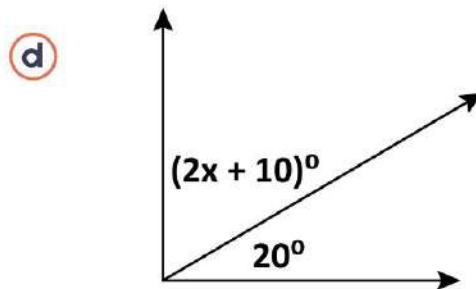
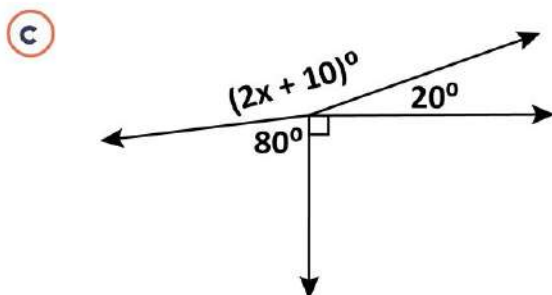
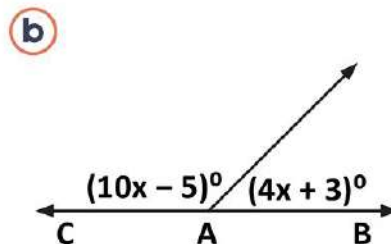
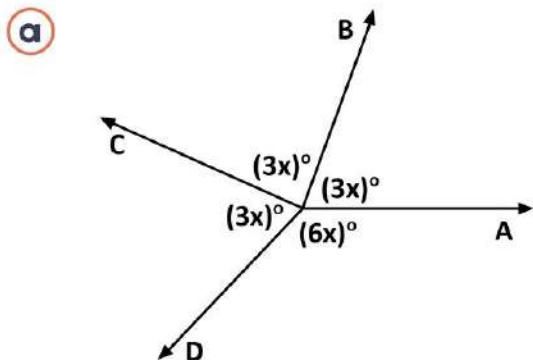
Q2: Answer The Following

1 The angle of measure 70° is vertically opposite to an angle of measure

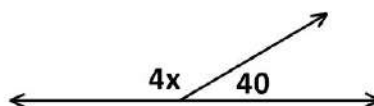
2 If the $m(\angle A) = \frac{1}{2} m(\angle B)$, $m(\angle A) = 30^\circ$, the two angles A and B are

3 The two vertically opposite angles are complementary, then the measure of each angle equals

4 Find the value of x of the following:



5 Find the value of x =



6 Zero angle supplements angle.

7 If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$, then $m(\angle B) = \dots\dots\dots^\circ$

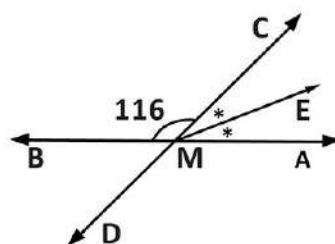
8 The sum of measure of accumulative angles at a point equals $^\circ$

9 If $m(\angle A) = 46^\circ$. then $m(\text{reflex } \angle A) = \dots\dots\dots^\circ$

10 $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $m(\angle CMB) = 116^\circ$

, $\overrightarrow{ME}$ bisects $\angle AMC$

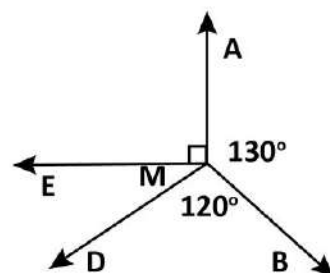
Find: $m(\angle AMD)$, $m(\angle AMC)$, $m(\angle AME)$



11 In the opposite figure:

$\overrightarrow{MA} \perp \overrightarrow{ME}$

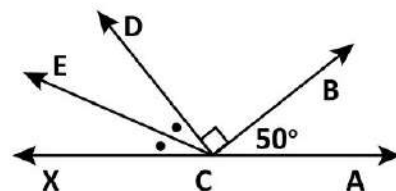
Find $m(\angle EMD)$



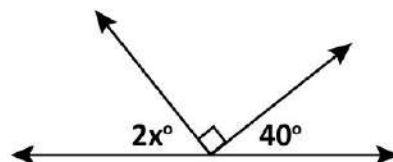
12 In the opposite figure:

$\overrightarrow{CE}$ bisects $\angle DCX$

Find $m(\angle ECA)$



13 Find the value of x



Q1: Choose the correct answer

1 If $2ab = 10$, then $3ab = \dots\dots\dots$ ☐ a 5☐ b 6☒ c 15☐ d 302 The solution set of the equation $4x = -12$ in N is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{3\}$ ☒ c $\emptyset$ ☐ d $\{0\}$ 3 The additive inverse of $x - 5$ is $\dots\dots\dots$ ☐ a $x - 5$ ☐ b $-x - 5$ ☒ c $-x + 5$ ☐ d 54 $2x = 2$, then $3x - 1 = \dots\dots\dots$ ☒ a 2☐ b 3☐ c 4☐ d 55 If $5x + 8x + 2x + 4x = 114$, then $5x + 3 = \dots\dots\dots$ ☒ a 33☐ b 35☐ c 47☐ d $8x$ 6 $7x + 5y + z$ increases $2x - y + z$ by $\dots\dots\dots$ ☐ a $5x + 4y + 2z$ ☒ b $5x + 6y$ ☐ c $9x + 4y$ ☐ d $9x - 6y - 2z$ 7 If $x + 3 = 5$, $x \in Z^-$, Then the solution set is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{5\}$ ☐ c $\{-5\}$ ☒ d $\emptyset$ 8 The sum of $x + 2y - 3z$ and $-2y - x - 3z$ is $\dots\dots\dots$ ☒ a $-6z$ ☐ b zero☐ c $6z$ ☐ d $2x - 4y + 6z$ 9 If $x + 2 = |-4|$, then $x = \dots\dots\dots$ ☐ a -2☒ b 2☐ c 6☐ d -610 Which of the following equations is equivalent to the equation $x + 3 = 12$ ☐ a $x - 3 = -12$ ☐ b $x + (-3) = 12$ ☒ c $x - (-3) = 12$ ☐ d $x - (-3) = -12$ 

11 Which of the following algebraic terms is like the algebraic term $2x^2y^2$?

☐ a $2y^2x$

☐ b yx^2

☐ c $2x^2$

☒ d x^2y^2

12 $4x$ increases $(-4x)$ by

☐ a zero

☒ b $8x$

☐ c $-8x$

☐ d $16x$

13 $k + k + k = \dots\dots\dots$

☐ a k^3

☒ b $3k$

☐ c $3k^3$

☐ d $k + 3$

14 $2x^2 + 4x^2 = \dots\dots\dots$

☐ a $6x^4$

☒ b $6x^2$

☐ c $8x^2$

☐ d $8y^4$

15 The expression: $2x + 3y$ exceeds $3y - 2x$ by

☐ a $-6y$

☐ b $-4x$

☒ c $4x$

☐ d $6y$

16 The result of subtracting $7a$ from $15a$ is

☐ a $-8a$

☒ b $8a$

☐ c $8a^2$

☐ d $-22a$

17 The solution set of the equation: $2(x - 4) = 0$ in Q is

☐ a $\{-4\}$

☒ b $\{4\}$

☐ c $\{0\}$

☐ d $\{8\}$

18 Which of the following equations has no solution in Z ?

☐ a $6x = 24$

☒ b $6x = 15$

☐ c $6x = 18$

☐ d $6x = 12$

19 If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is

☐ a $\{5\}$

☐ b $\{2\}$

☐ c $\{1\}$

☒ d $\emptyset$

20 Two consecutive odd numbers add up to 28. Which of the following equations expresses this?

☐ a $x + x + 1 = 28$

☐ b $2x + 1 = 28$

☐ c $2x - 1 = 28$

☒ d $2x + 2 = 28$



Q2: Answer The Following

- 1 Add the expressions: $3a - 2b$ and $2a + 5b$ then find the numerical values of the result when $a = 2$ and $b = 1$.

$$5a + 3b; \text{ value at } a=2, b=1 \rightarrow 13$$

- 2 Simplify: $5(a - 2b) + 3(4a + b)$ in its simplest form

$$17a - 7b$$

- 3 $2a^2 - 3ab - 5b^2$ decreases $4a^2 + 3b^2 + ab$ by

$$2a^2 + 8b^2 + 4ab$$

- 4 The coefficient of the algebraic term $-3k^3$ is**-3**...

- 5 The perimeter of the rectangle whose dimensions are $7y$, $4y$ is**22y**.

- 6 The decrease of $-3ab$ than $2ab$ is**5ab**...

- 7 $5a^2b - \dots\dots$ **$-2a^2b$** $= 7a^2b$

- 8 $5x$ increases $(-5x)$ by**10x**...

- 9 Write the following expressions in the simplest form:

$$\textcircled{a} -5x - 7y - 7x - 2y + 7y - 3x$$

$$\textcircled{a} 2(3x - 4) - 3(x - 2)$$

$$-15x - 2y$$

$$3x - 2$$

- 10 Find in Z the solution set of the equation: $2x - 5 = -17$

$$\{-6\}$$



11 Find the S.S of the following equations in Q:

a $4(x + 1) = 2(x - 1)$

$\{-3\}$

b $3x + 6 = 30 - 5x$

$\{-3\}$

c $3y + 6(y + 3) - (8y - 16) = 66$

$\{32\}$

d $a + 5a - 2 = 2(3 - a)$

$\{1\}$

12 Two integer numbers their difference is 12 and the smaller is m, then the greater is **$m + 12$**

13 A parallelogram with a base length of 12 cm. Its corresponding height is $(3x - 1)$ cm and its area is 60 squared centimeter, then $x = \dots\dots\dots$ **2**

14 If $x + 9 = 11$, then the value of: $7x = \dots\dots\dots$ **14**

15 $2(x + 3) = 20$, Then the value of $x = \dots\dots\dots$ **7**

16 The difference between two natural numbers is 5 and their sum is 21
What are the two numbers ?

13 and 8

17 The solution set of $3x - 1 = 2x + 5$, where $x \in \mathbb{N}$ is **$\{6\}$**

18 The number when added to its triple becomes 72 is **18**

19 If x is an odd number, then the next odd number to it is **$x + 2$**

20 The solution set in $\mathbb{N}$ of $7.4 - y = 2.4$ is **$\{5\}$**

21 The set of substitution is $\{1, 2, 3, 4\}$, then the set of solution of the equation $x + 6 = 10$ is **$\{4\}$**



22 Find the S.S of the following equations in N:

a $6x - 2x + 7 = 4$

$\emptyset$

b $4(x - 1) = 3(x + 1)$

$\{7\}$

c $-2(x + 1) = 3$

$\emptyset$

d $3(x - 2) = 5x - 10$

$\{2\}$

23 Three consecutive numbers whose sum is 213, what are there numbers?

70, 71, and 72

24 Find in Z the solution set of the equation: $3x + 5 = 17$

$\{4\}$

25 If: $5n = 20$ find the value of: $8 - 2n$

0

26 If $(x + 1)$ is the additive inverse of (-2) , then $x = \dots\dots\dots$

1

27 Two integers, their sum is 5, if one of them is x , then the other one is $\dots\dots\dots$

$5 - x$

28 Express the following situation with a suitable equation:
The sum of two consecutive odd integers is 32

$x + (x + 2) = 32$

29 Three consecutive numbers whose sum is 102, what are the numbers?

33, 34, and 35.



Q1: Choose the correct answer

1 The sum of the measures of 4 angles around a point is the sum of the measures of 5 angles around a point.

a >

b =

c <

d ≥

2 In the opposite figure:

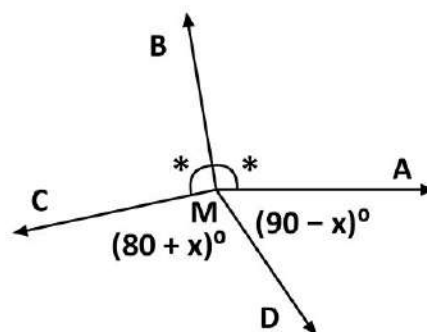
What is the measure of $\angle AMB$?

a 190°

c 90°

b 95°

d 80°



3 The sum of supplementary angles equals the sum of the measures of angles.

a 2 right

c 3 right

b 4 right

d 5 right

4 If angle measure Y complements an angle of measure

a $180^\circ - Y$

b $90^\circ - Y$

c $180^\circ + Y$

d $90^\circ + Y$

5 The zero angle complements angle.

a zero

b acute

c obtuse

d right

6 The angle of measure 179° is a/an angle

a acute

b straight

c obtuse

d right

7 If $\angle X$ complements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, then $m(\angle Y) = \dots\dots\dots$

a 45°

b 30°

c 60°

d 90°

8 Obtuse angle supplements angle.

a acute

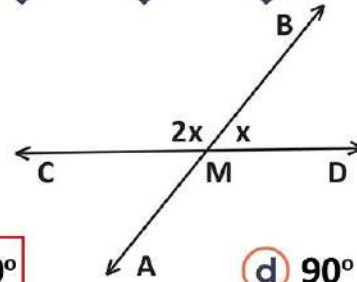
b straight

c obtuse

d right



- 9 If two straight lines AB and CD intersect at M, then $m(\angle AMC) = \dots\dots\dots$



- (a) 30° (b) 45° (c) 60° (d) 90°

- 10 If the ratio of two supplementary angles is 5 : 13, then the measure of the smaller angle is

- (a) 50° (b) 130° (c) 150° (d) 180°

- 11 The sum of accumulative angles at a point equals the sum of the measures of angles.

- (a) 2 rights (b) 4 rights (c) 3 rights (d) 5 right

- 12 If the ratio of measures of three accumulative angles 5 : 3 : 4, Then the measure of the greatest angle is $^\circ$.

- (a) 30° (b) 150° (c) 180° (d) 90°

- 13 If the ratio of two complementary angles is 7 : 11, then the measure of the smaller angle is

- (a) 145° (b) 190° (c) 90° (d) 35°

- 14 If the two vertically angles are complementary angles, the the measure of each angle is

- (a) 45° (b) 50° (c) 180° (d) 90°

- 15 If two straight lines intersect, then each two vertically angles are

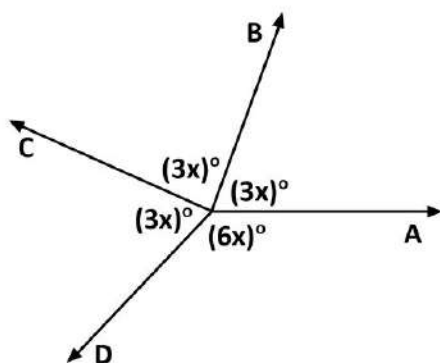
- (a) supplementary (b) adjacent (c) equal in measure (d) complementary



Q2: Answer The Following

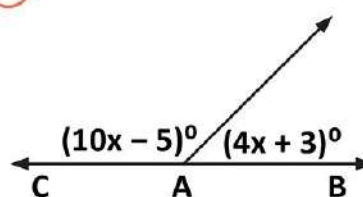
- The angle of measure 70° is vertically opposite to an angle of measure 70° .
- If the $m(\angle A) = \frac{1}{2} m(\angle B)$, $m(\angle A) = 30^\circ$, the two angles A and B are **complementary**.
- The two vertically opposite angles are complementary, then the measure of each angle equals 45° .
- Find the value of x of the following:

a



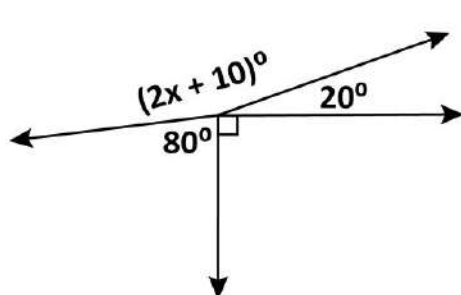
15

b



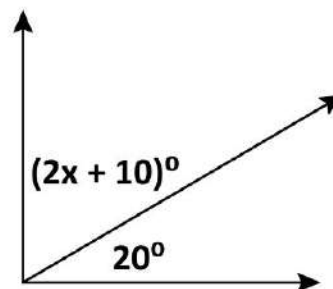
13

c



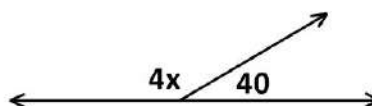
35

d



30

- Find the value of x = 35 .



6 Zero angle supplements angle.

7 If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$, then $m(\angle B) = 54^\circ$

8 The sum of measure of accumulative angles at a point equals 360°

9 If $m(\angle A) = 46^\circ$. then $m(\text{reflex } \angle A) = 314^\circ$

10 $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $m(\angle CMB) = 116^\circ$

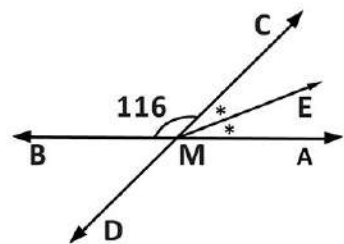
, $\overrightarrow{ME}$ bisects $\angle AMC$

Find: $m(\angle AMD)$, $m(\angle AMC)$, $m(\angle AME)$

116

64

32

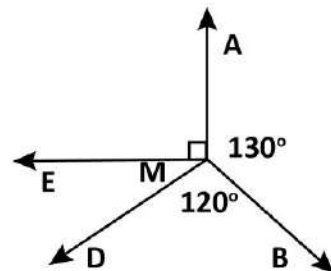


11 In the opposite figure:

$\overrightarrow{MA} \perp \overrightarrow{ME}$

Find $m(\angle EMD)$

20

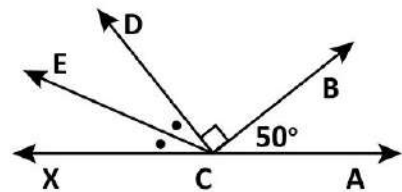


12 In the opposite figure:

$\overrightarrow{CE}$ bisects $\angle DCX$

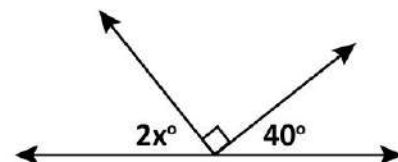
Find $m(\angle ECA)$

95



13 Find the value of x

70



حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر نوفمبر



Unit 2

Lesson 1

Mathematical Expressions

لازم نعرف

فالإبداية

Numerical Expression

Consists of One or more numbers with (+, -, x or ÷)

يتكون من أعداد بينهم علامة (+ أو - أو x أو ÷)
ولا توجد علامة =

$$20 \div 5 - 1$$



Algebraic Expression

Consists of one or more variables (Letters) or Combination of numbers and variables.

يتكون من حروف أو حروف وأرقام بينهم

$$5 + x$$

$$n + 3$$

+ - ÷ x



The equation

Two mathematical Expressions with an equal sign (=) between them.

$$2x - 1 = 5$$

لا بد فتوى على علامة =

The inequality

Two mathematical Expressions with Sign >, <, ≥, ≤

$$5x - 1 > 9$$

$$2x + 3 \leq 5$$

لازم فتوى < أو >



- **Formula** Fact, Rule or principle
القانون
Equation, inequality and other
مقدول يعتبرها



- **Algebraic Term**
Product or quotient of number and variable or more.

حاصل ضرب أو ناتج قوة عدد وحرف
 $3x$ $-5y$ $2ab$

يسمى العدد الذي أمام الحرف

ملفوظة كملفوظة

Coefficient

في ال 3 و -5 و 2 في المثال الى فوقه

- **Like algebraic Term** Same
variable / power
نفس الحرف بنفس الباور

$5x^2$, $-3x^2$, $7x^2$

Unlike
لاختلاف الباور

ملفوظة

لا يمكن جمع او طرح ال

Unlike Terms

لا يمكن و اياك وعيب وحرام تقول

ممنوع

$$2x + 3y = 5xy$$

$$2x + 3 = 5x$$

Attention

ما يقولك

خلى بالك

- Subtract $5x$ From $-2x$

الى بعد From

نكس
الترتيب

$$-2x - 5x = -7x$$

- Decrease of $2a$ than $8a$

تبقي

$$8a - 2a = 6a$$

- Increase of $2x$ than $-2x$

نفس الترتيب

$$2x - (-2x) = 2x + 2x = 4x$$

المعاصر

Algebraic Expression	No. Terms	Coefficient	Like Terms	Constant
$4x + 2 - 7 - x$	4	4, -1	$4x, -x$ $2, -7$	
$6n - 9n - 4 + n$	4	6, -9, 1	$6n, -9n, n$	-4
$-7xy - 3x + 4y + 5$	4	-7, -3, 4	—	5
$13abc^2$	1	13	—	—
$6 - 3x^2y^2 + 5xy - x^2y^2$	4	-3, 5, -1	$-3x^2y^2, -x^2y^2$ $5xy$	6



profhelwan

32

(ex) Express each of The following :

[1] Double The number x add to 5 equal to 1

$$2x + 5 = 1 \quad \text{Equation}$$

[2] The area of Square (A) with Side length (l)

$$A = l \times l \quad \text{Formula}$$

[3] Speed of Car must not exceed

$$120 \text{ km/hr} \quad x \leq 120 \quad \text{Inequality}$$

[4] Sally's age 5 years ago, if She is now x years ago

$$x - 5 \quad \text{Expression}$$

[5] The arithmetic mean of two numbers x and y is not less than 18

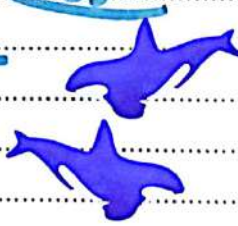
Arithmetic Mean

$$\frac{x+y}{2}$$

دالة قاعدية
متوسط
عدد

متوسط

$$\frac{x+y}{2} \geq 18$$



[6] A rectangle with dimensions x and y whose area is 36 cm^2

$$xy = 36$$

[7] Perimeter of triangle whose Sides a, b and c

$$P = a + b + c$$

Unit 2

Addition and Subt.
Algebraic Expressions

Lesson 2

Addition

- Find result of addition of

A) $3x - 2y + 5$, $x + 2y - 2$

Solution

نمای اترتیب

$$3x - 2y + 5$$

$$x + 2y - 2$$

$$4x + 3$$

B) $-4a - 3b + 5c$, $-4b - 3a + c$

Solution

$$-4a - 3b + 5c$$

$$-3a - 4b + c$$

$$-7a - 7b + 6c$$

C) $2x - 3y + z$, $7y - 5x - z$, $3x - 4y + z$

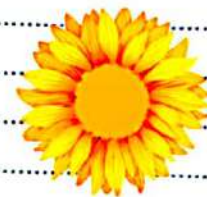
Solution

$$2x - 3y + z$$

$$-5x + 7y - z$$

$$3x - 4y + z$$

$$z$$



Subtraction

- الی بعد from بکتب اول و ثانی تغییر اشارته
- الی بعد Increase بکتب اول و ثانی تغییر اشارته
- decrease نکس بترتیب زی from

what is The expression that, ^{لوقال}

Added to → نکس بترتیب

Subtracted from → مثن عنکس بترتیب

1] Subtract $-4b + 5a + c$ from

Solution

$$\begin{array}{r} -3c + 7b - a \\ -3c + 7b - a \\ \oplus c \oplus 4b \oplus 5a \\ \hline -4c + 11b - 6a \end{array}$$

2] what is the increase of

Solution $7a - 8b + 4c$ than $-3a - 5c + b$

$$\begin{array}{r} 7a - 8b + 4c \\ \oplus 3a \oplus b \oplus 5c \\ \hline 10a + 7b + 9c \end{array}$$



3) what is The decrease of $-4x - 3y + 8$ Than $7 + 3x + y$

Solution

$$\begin{array}{r} 7 + 3x + y \\ \ominus 8 \oplus 4x \oplus 3y \\ \hline -1 + 7x + 4y \end{array}$$

4) what is the expression that should added to $8a - 3b + 5$ to get result $3b + c$?

Solution

$$\begin{array}{r} 3b + c \\ \ominus 8a \oplus 3b \ominus 5 \\ \hline -8a + 6b + c - 5 \end{array}$$



5) what is the expression must be Subtracted from $4k - 3l - 5m$ to get The result $-5m - 2l + k$?

Solution

$$\begin{array}{r} 4k - 3l - 5m \\ - k \oplus 2l \oplus 5m \\ \hline 3k - l \end{array}$$

ملحوظة بالازم
Subtracting $3x - 2y$ from Zero = $-3x + 2y$

ملحوظة بالازم

36

Unit 2

Linear Equations

Lesson 3

في درس دة هنتعلم ازاى نحل ال Equation
يبنى نجيب ال value of x

مرة لو ابدانا ال Substitution set

مرة لو ما ابدناش وقال in N or Z or Q

النوع الاول ← هنا بنجيب قيم x اللى تحقق Equation

* Find Solution Set (S.S) using The given Substitution set

(1) $2x + 1 = 7$ Substitution = $\{2, 3, 4\}$

when

$x = 2 \quad \therefore 2 \times 2 + 1 = 5 \neq 7$

$x = 3 \quad \therefore 2 \times 3 + 1 = 7$

$\therefore S.S = \{3\}$

(2) $3x + 2 = 17$ Substitution = $\{3, 4, 5, 6\}$

when

$x = 3 \quad 3 \times 3 + 2 = 11 \neq 17$

$x = 4 \quad 3 \times 4 + 2 = 14 \neq 17$

$x = 5 \quad 3 \times 5 + 2 = 17$

$S.S = \{5\}$



النوع الثاني افترض ان

$N = \{0, 1, 2, 3, \dots\}$ Natural numbers

$Z = \{\dots, -2, -1, 0, 1, 2, \dots\}$ Integer numbers

Q Rational numbers
decimals, Fractions, $\mathbb{Z}$, $\mathbb{N}$ وتسمى

في النوع دة من المسائل يعمل ككس يكتب

بص كدة

* Find 5.5 in Q :

$$\textcircled{1} \quad 2x - 1 = 5$$

$$2x = 5 + 1$$

$$2x = 6$$

$$x = \frac{6}{2} = 3 \in Q$$

$$5.5 = \{3\}$$

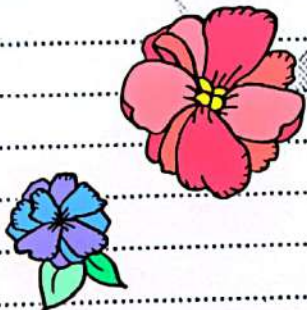
$$\textcircled{2} \quad 4 + 5x = 9$$

$$5x = 9 - 4$$

$$5x = 5$$

$$x = \frac{5}{5} = 1 \in Q$$

$$5.5 = \{1\}$$



$$\textcircled{3} \quad 5(x-1) = 20$$

$$5x - 5 = 20$$

$$5x = 20 + 5$$

$$5x = 25$$

$$x = \frac{25}{5} = 5$$

$$S.S = \{5\}$$



$$\textcircled{4} \quad 3x + 2 = x - 6$$

$$3x - x = -6 - 2$$

$$2x = -8$$

$$x = \frac{-8}{2} = -4$$

$$S.S = \{-4\}$$

$$\textcircled{5} \quad 3(x-1) + 4 = 3$$

$$3x - 3 + 4 = 3$$

$$3x + 1 = 3$$

$$3x = 3 - 1 = 2$$

$$x = \frac{2}{3}$$

$$S.S = \left\{\frac{2}{3}\right\}$$



$$\textcircled{6} \quad \frac{x+1}{3} = \frac{x-1}{4}$$

$$4x - 3x = -3 - 4$$

$$x = -7$$

$$4x + 4 = 3x - 3$$

$$S.S = \{-7\}$$

Geometry

Unit 4

Lesson 1

Types of angles and relations between them

Angle:

Union of two rays with Common Starting point.

$$\overrightarrow{BA} \cup \overrightarrow{BC} = \angle ABC$$



$\angle ABC$ or $\angle CBA$, $\angle A$ or $\angle 1$

Angle measure

Tool: protractor

الدرجة
القلم

Measure unit

1° degree = 60' minute

1' minute = 60'' Seconds

Types of angles

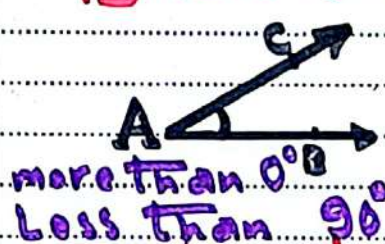
زوايا صامتة ودرجات
Zero Samya we Rehab

[1] Zero



Sides Coincide

[2] Acute

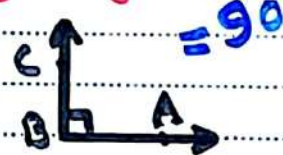


[5] Straight

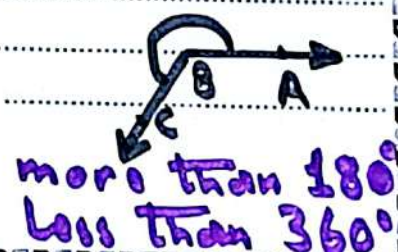


Sides forming
Straight line

[3] Right



[6] Reflex



ملاحظة كبقوة

Measure of $\angle A$ + measure of its reflex = 360°

if $m(\angle A) = 100^\circ$ then $m(\text{reflex of } \angle A) = \dots^\circ$ $360^\circ - 100^\circ = 260^\circ$

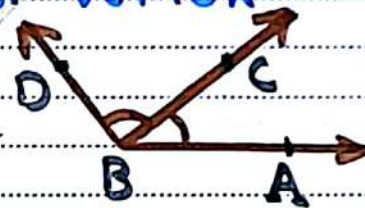
Relations between angles

1. Adjacent angles

التجاوران

Two angles have Common
a. Side b. vertex

$\angle ABC$, $\angle CBD$ have
Common
a) vertex $\angle B$



b) Side $\overrightarrow{BC}$ The other two sides

Lying on opposite sides of The Common one

2. Complementary angles

90

Two Angles Have sum of 90°

Angle of measure 75° Complements 15°

3. Supplementary angles

180

Two Angles Have sum of 180°

Angle of measure 100° Supplements 80°

- The angle that measure 80° Complements an angle of measures 10° and Supplements an angle that measure 100° .

4. Adjacent Supplementary angles:

"The two adjacent angles formed by the intersection of Straight line and a ray whose Starting Point lies on the straight line are Supplementary.

$$180 - 130 = 50^\circ$$



5. Adjacent Complementary angles

$$90 - 70 = 20^\circ$$



مكملة من مكملة

للزاويتين المتجاورتين

الضلعين الكا، حيث

The outer Sides of adjacent angles:

لو كانا

يقعوا على خط واحد

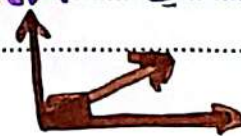
if They Supp. $\rightarrow$ Lie on Straight line



ولو كانوا

if They Comp. $\rightarrow$ perpendicular to each other.

يقعوا متعامدين

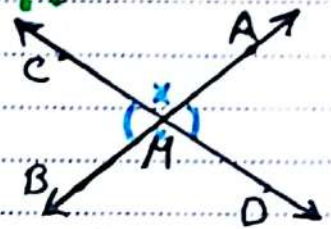


Unit 4 [Continue to Angles Relationships]

Lesson 2

• Vertically opposite angles v.o.A

If two straight lines intersect then each two opposite angles are equal in measures

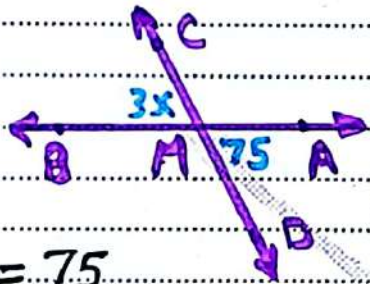


if $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$ then $\text{الزاوية المقابلة} = \text{الزاوية المقابلة}$

$m(\angle AMD) = m(\angle CMB)$ $\text{الزاوية المقابلة} = \text{الزاوية المقابلة}$

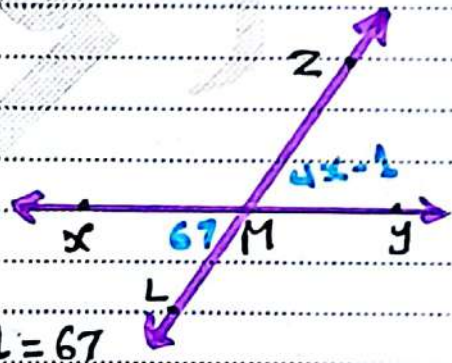
$m(\angle AMC) = m(\angle BMD)$

Ex: find value of x



$$3x = 75$$

$$x = 75 \div 3 = 25^\circ$$



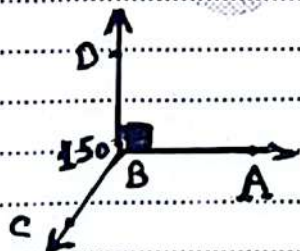
$$4x - 1 = 67$$

$$4x = 67 + 1 = 68$$

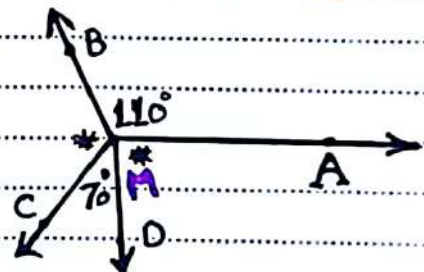
$$x = 68 \div 4 = 17^\circ$$

• The accumulative angles at a point.

The sum of measures of accumulative angles at a point = 360°



$$m(\angle ABC) = 360 - (90 + 150) = 120^\circ$$



$$m(\angle BMC) = \frac{360 - (110 + 70)}{2} = 90^\circ$$

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

